

# THE AMERICAN PRACTITIONER.

DECEMBER, 1881.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

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## Original Communications.

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### EPIDEMIC CONVULSIONS.\*

BY DAVID W. YANDELL, M.D.†

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Extraordinary interest was excited in the popular mind of Kentucky at an early day by a form of convulsive disease which, though it had been witnessed elsewhere in the world, had never before assumed a shape so decidedly epidemic. Among the Camisards or French Prophets, who appeared in the mountains of the Cevennes toward the close of the seventeenth century, the subjects when about to receive the gift of prophecy were often affected with trembling and fell down in swoons. When the fit came, no matter where they were, they fell, smiting

\* Reprinted from "Brain."

† The larger part of the materials contained in this paper were collected by my father, the late L. P. Vandell, M.D., and were intended to be embraced in the Medical History of Kentucky, a work on which he was engaged at the time of his death. I have done little more than arrange and place them in their proper chronological order.—D. W. Y.

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their breasts with their hands, crying for mercy and imprecating curses on the Pope. They were finally, after an obstinate struggle, put down by their insane persecutor, Louis XIV.\*

Epidemic convulsions prevailed in Scotland half a century later. Multitudes, under pungent preaching, were violently agitated, uttering loud cries, shaking, trembling, bleeding at the nose, the minister promoting the uproar by urging them not to stifle their convictions. The shriek or the shout, it is stated, never rose from one but that others joined the outcry.† The early career of John Wesley is well known to have been marked by similar disorders. In his journal he records numerous instances of men and women dropping to the ground under his preaching "as if struck by lightning," ten or a dozen praying at once. They had also prevailed extensively in New Zealand half a century before they became epidemic in Kentucky. The elder Edwards has left an instructive account of the bodily agitations which accompanied the revivals of religion from 1735-1742. Many instances are given of fainting, falling, trance, numbness, outcries, and convulsions, and he relates that some of the subjects lost their reason.‡ The epidemic of Kentucky spread more widely, and persisted for a longer time, as well as in more extravagant forms. It continued to reappear for several years, and involved a district of country extending from Ohio to the mountains of Tennessee, and even into the old settlements in the Carolinas. Lorenzo Dow relates that at a religious meeting in the court-house of Knoxville, when the Governor of Tennessee was present, he saw one hundred and fifty people "jerking" at one time. But at other places the frenzy reached a greater height. It was computed that at a religious meeting in Kentucky not less than three thousand persons fell in convulsions to the ground.

The extraordinary religious excitement in which these nervous disorders took their rise commenced in Logan County, Ky., under the preaching of Rev. James McGready, described as a

\* *Encycl. Amer.*, art. "Cevennes."

† *Rees's Cyclopaedia*, art. "Imitation."

‡ Edwards on Revivals.

man of "hideous visage and thunder-tones," with a highly impassioned style of eloquence.\* The excitement abated soon, but was renewed in a more intense form three years later, and continued to grow and deepen until it reached its height about the year 1800. Its effects were described by this fiery preacher as at that time "exceeding every thing his eyes had ever beheld upon earth." Families came in wagons forty, fifty, and a hundred miles to attend the meetings, and it became necessary to establish camps for their accommodation. These camp-meetings generally continued four days, from Friday to Tuesday morning, but sometimes they lasted a week. One succeeded another in rapid succession, and thus the fervor of religious feeling was kept up. The woods and paths leading to the camp-ground seemed alive with people. "The laborer," says Dr. Davidson in the work just quoted, "quitted his task, age snatched his crutch, youth forgot his pastimes, the plow was left in the furrow, the deer enjoyed a respite upon the mountains, business of all kinds was suspended, dwelling-houses were deserted, whole neighborhoods were emptied, bold hunters and sober matrons, young men, maidens, and little children flocked to the common center of attraction. Every difficulty was surmounted, every risk ventured to be present at the camp-meeting."

The concourse became immense. At one of these assemblages the attendance was computed at twenty thousand souls. And here were united all the elements best suited to stir the emotional nature of man and to derange his nervous system. The spectacle at night, as Dr. Davidson depicts it, was one of the wildest grandeur. With great beauty of description he says, "The glare of the camp-fires, falling on a dense assemblage of heads simultaneously bowed in prayer, and reflected back from long ranges of tents upon every side; hundreds of candles and lamps suspended among the trees, together with numerous torches flashing to and fro, throwing an uncertain light upon the tremulous foliage; the solemn chanting of hymns swelling and falling on the night wind; the impassioned exhortations, the

\* Dr. Davidson's History of the Presbyterian Church in Kentucky.

earnest prayers, the sobs, shrieks, or shouts bursting from persons under intense agitation of mind; the sudden spasms which seized upon scores, and unexpectedly dashed them to the ground—all conspired not only to invest the scene with terrific interest, but to work up the feelings to the highest pitch of excitement.”\*

To these circumstances that tended so powerfully to excite the nervous centers we have to add others which gave intensity to their effect. The meetings were protracted to a late hour in the night, keeping the feelings long upon the stretch. A reverent and general enthusiasm ascribed the bodily agitations to a mysterious, divine agency. The preaching was fervid and impassioned in the extreme. Many of the preachers, unable to control their emotions during the sermon, went around in “a singing ecstasy,” shouting and shaking hands with others as much excited as themselves. In this way every thing was done to “heap fuel on the fire,” and it was at such meetings that thousands fell in convulsions to the ground.

Some of the actors in these strange scenes have left records of the state of their minds, which show that they were in a condition bordering on insanity, if not actually insane. One of them relates that while under conviction on account of his sins he went about the woods for two years, through rain and snow, “roaring, howling, praying, day and night.” And when light and hope broke in at last upon his mind, which he describes as a “rushing, mighty wind that descended from heaven and filled his whole being,” he went shouting over the encampment all night and a great part of the next day. He continues, “I now made the mountains, woods, and canebrakes ring louder with my shouts and praises than I once did with my howling cries. I never fell on my knees in secret but the Lord poured out his power, so that I shouted out aloud. Sometimes I shouted for two or three hours, and even fainted under the hand of the Lord. I was ready to cry out at the name of Jesus. The brightness of heaven rested continually upon my soul, so that

\* Dr. Davidson's History of the Presbyterian Church in Kentucky.



I was often prevented from sleeping, eating, reading, writing, or preaching. I would sing a song or exhort a few minutes, and the fire would break out among the people. I have spent nine nights out of ten (besides my day-meetings and long, hard rides) with the slain of the Lord."\*

Granade is the preacher who gives this description of himself, which is also descriptive of his times. He was a stormy orator who drew great crowds wherever he went. He admits that he went by the name of "the distracted preacher," but says that at one of his meetings "the people fell as if slain by a mighty weapon, and lay in such piles and heaps that it was feared they would suffocate, and that in the woods." So violent was his manner, stamping with his feet and smiting with his hands, that he often broke down the stands erected for him in the woods. Once, it is told of him, he was addressing a class-meeting in the upper story of a dwelling-house, when the room below was crowded with worshipers, and being in what the historian calls "one of his big ways" he exclaimed, "I feel like breaking the trigger of hell," and at the same time gave a tremendous stamp with his foot which actually broke one of the joists. The people below, hearing the sudden cash, ran screaming to the door, some of them really imagining, as the writer of all these events relates, "that hell had overtaken them."†

Granade was of an excitable temperament and vivid imagination. His person was commanding, and with a sounding voice and most impassioned manner his oratory produced startling effects.

Another feature of these excited meetings which served still further to intensify the feelings of the people who attended them for days and nights together, was the part taken in them by children. Nothing was more affecting to the congregations than the sight of a little boy or girl, on a log or stump, passionately exhorting the multitude. Thus, a boy who appeared to be about twelve years of age is described as having retired from the stand at Indian Creek, Ohio, during the sermon, and mounting a log,

\* McFerrin's Methodism in Tennessee.

† Ibid.

and raising his voice to a high pitch, soon had nearly all the congregation with him. "With tears streaming down his cheeks he cried aloud to the wicked, warning them of their danger, denouncing their certain doom if they persisted in their sins, expressing his love for their souls and desire that they should turn to the Lord and be saved." A man on each side held the boy up, and he spoke for about an hour. When quite exhausted, and language failed to give utterance to his emotions, the little orator raised his hands, and dropping his handkerchief wet with tears and perspiration cried out, "Thus, O sinner, shall you drop into hell unless you forsake your sins and turn to the Lord." "At that moment," the writer of this account continues, "some fell like those who are shot in battle, and the work spread in a manner which human language can not describe."\*

McNemar instances boys of eight and ten years, and the Rev. John Lyle mentions one of seven, who called on sinners to repent with an eloquence singularly overpowering. Possessed by one dominant idea, the people gave themselves up to the wildest enthusiasm, and it was no uncommon thing for them to spend the whole night in religious orgies such as have been described.†

The spectacle of persons falling down in a paroxysm of feeling was first exhibited at Gasper River Church, in one of McGready's congregations in the summer of 1779. The movement proved highly contagious, and spread in all directions. After a rousing appeal to the feelings of the listeners, and especially during spirited singing, one and another in the audience would fall suddenly to the ground and swoon away.\* Not only nervous women, but robust young men were overpowered. Some, continues the historian, fell suddenly as if struck by lightning, while others were seized with a universal tremor before they fell shrieking.† Dr. Blythe, who often witnessed scenes of this sort, assured Dr. Davidson that he had once felt the sensation himself, and only overcame the tendency to convulsion by a

\* McFerrin's Methodism in Tennessee.

† Davidson, op. cit.

‡ Lyle's Diary.

determined effort of his will. A few shrieks never failed to put the assembly in motion and set men and women to falling all around. A sense of "pins and needles" was complained of by many of the subjects, and others felt a numbness of body and lost all volitional control of their muscles. It soon grew into a habit, and those who had once fallen were ready to fall again under circumstances by no means exciting. Women who had suffered repeated attacks sometimes fell from their horses on their way to or from the meeting-house while relating their past religious exercises.

The condition in some of the subjects was cataleptic, lasting generally from a few minutes to two or three hours; but in a few cases it continued many days. Others were violently convulsed as in hysteria or epilepsy—"wrought hard in fitful nervous agonies, the eyes rolling wildly." Most were speechless, but some were capable of conversing throughout the paroxysm. The extremities were cold, the face was pale or flushed, the breathing hard. Sensibility was annulled. Mr. Lyle, one of the prominent preachers of the times, having been furnished by Dr. Warfield with a vial of hartshorn, applied it to a stout young man who was lying flat on his back, and inadvertently let some of the fluid run into his nostrils, but he took not the slightest notice of it.\* Others who fell hard to the ground, or in running encountered stumps or trees, felt no pain from the violence. So many fell at Cabin Creek camp-meeting, it is related, that to prevent their being trodden upon "they were laid out in order on two squares of the meeting-house, covering the floor like so many corpses." At Paint Creek sacrament two hundred were estimated to have fallen; at Pleasant Point three hundred were prostrated; while at Cane Ridge, as has been stated, the number who fell was believed to have reached three thousand.

The "jerks," as they were termed, presented some novel and remarkable features. Their first occurrence is reported to have been at a sacramental meeting in East Tennessee, where several hundred people of both sexes were seized with this strange

\* Davidson's History.

convulsive movement. The Rev. B. W. Stone has left a vivid description of it. Sometimes, he says, the subject was affected in a single member of his body, but at others the spasms were universal. When the head alone was affected it would be jerked from side to side so quickly that the features of the face could not be distinguished. When the whole system was affected, he continues, "I have seen the person stand in one place and jerk backward and forward in quick succession, the head nearly touching the floor behind and before. All classes, saints and sinners, the strong as well as the weak, were thus affected. I have seen some wicked persons thus affected, and all the time cursing the jerks, while they were thrown to the earth with violence."\*

The first form in which these spasmodic movements made their appearance was that of a simple jerking of the arms from the elbow downward. When they involved the entire body they are described as something terrible to behold. The head was thrown backward and forward with a celerity that alarmed spectators, causing the hair, if it was long, "to crack and snap like the lash of a whip."†

The most graphic description of the "jerking exercise" was written by the Rev. Richard McNemar, an eye-witness of the frenzy, as well as an apologist, believing it to be a display of divine favor. In his *History of the Kentucky Revival* he says, "Nothing in nature could better represent this strange and unaccountable operation than for one to goad another alternately on every side with a piece of red-hot iron. The exercise commonly began in the head, which would fly backward and forward and from side to side with a quick jolt, which the person would naturally labor to suppress, but in vain; and the more any one labored to stay himself and be sober the more he staggered and

\* McFerrin's Methodism in Tennessee.

† Dr. Davidson, who relates this singular fact, felt it necessary to authenticate the statement by referring to eye- and ear-witnesses of its reality. I remember to have heard my grandmother describe, when I was but a little boy, the same thing as occurring in a woman at a camp-meeting near her home in Tennessee in 1810.

the more his twitches increased. He must necessarily go as he was stimulated, whether with a violent dash on the ground, and bounce from place to place like a football, or hop round with head, limbs, and trunk twitching and jolting in every direction as if they must inevitably fly asunder. And how such could escape without injury was no small wonder to spectators. By this strange operation the human frame was commonly so transformed and disfigured as to lose every trace of its natural appearance. Sometimes the head would be twitched right and left to a half-round with such velocity that not a feature could be discovered, but the face appeared as much behind as before. Head-dresses were of little account among the female jerkers. Handkerchiefs bound tight round the head were flung off with the first twitch, and the hair put into the utmost confusion. This was of very great inconvenience, to redress which the generality were shorn, though directly contrary to their confession of faith. Such as were seized with the jerks were wrested at once, not only from under their own government, but from that of every one else; so that it was dangerous to attempt confining them or touching them in any manner, to whatever danger they were exposed. Yet few were hurt, except such as rebelled against the operations through willful and deliberate enmity, and refused to comply with the injunctions which it came to enforce."

The same writer gives the history of a case of jerks as follows, and no case could illustrate more strikingly the nature of the affection: A young man of a pious family, the son of a tanner, feigned sickness one Sunday morning to avoid going that day to camp-meeting. He kept his bed until he was assured that all the family except a few negro children had left the premises, and was much pleased at the success of his stratagem. As he lay quietly in his bed his thoughts naturally turned to the camp-meeting in progress. The assembled multitude, excited, agitated, convulsed, rose up vividly before his mind. All at once, while occupied with the scene, he felt himself violently jerked out of bed, and dashed round the walls in a manner utterly beyond his control. Prayer, he remembered, was deemed effi-

cacious in such circumstances, and he fell upon his knees in the hope that it would prove a sedative in his case. It turned out as he hoped, and he returned to bed, happy at finding the spirit exorcised. But the enemy soon returned; the jerks were as bad as ever, but were again allayed by prayer. Dressing himself, he now went to the tanyard, and set about currying a hide to occupy his mind. He rolled up his sleeves, and, grasping his knife, was about to commence the operation, when suddenly the knife was flung out of his hand, and he was jerked violently backward over logs and against fences, as before. Gaining relief by resorting once more to prayer, he ventured to resume his occupation, but was again seized with convulsions, and at last forsook the tanyard and betook himself to strong cries for mercy, at which he was found engaged by the family on their return from the meeting in the evening.\*

Another characteristic example is related by a writer in the *Gospel Herald*:† A gentleman and lady of some note in the fashionable world were attracted by curiosity to the camp-meeting at Cane Ridge. They indulged in many contemptuous remarks on the way about the poor infatuated creatures who rolled over screaming in the mud, and promised jestingly to stand by and assist each other in case that either should be seized with the convulsions. They had not been long on the ground looking upon the strange scene before them, when the young woman lost her consciousness and fell to the ground. Her companion, forgetting his promise of protection, instantly forsook her and ran off at the top of his speed. But flight afforded him no safety. Before he had gone two hundred yards he too fell down in convulsions, "while a crowd flocked round him to witness his mortification and offer prayers in his behalf."

These nervous disorders assumed many other grotesque forms besides those which have been described. The subjects often rolled over and over on the ground, or ran violently until worn out by the exertion. Hysterical laughter was another modification. Instances of laughter were only occasional at first, but

\* *History of Methodism in the United States.*

† *Davidson, op. cit.*

it grew, until in 1803 the "holy laugh" was introduced systematically as a part of religious worship. Sometimes half the congregation, apparently in the most devout spirit, were to be heard laughing aloud in the midst of a lively sermon. As the excitement grew the infatuated subjects took to dancing, and at last to barking like dogs. McNemar says they actually assumed the posture of dogs, "moving about on all-fours, growling, snapping the teeth, and barking with such an exactness of imitation as to deceive any one whose eyes were not directed to the spot."\* Nor were the people who suffered so mortifying a transformation always of the vulgar classes. Persons of the highest rank in society, on the contrary, men and women of cultivated minds and polite manners, found themselves, by sympathy, reduced to this degrading situation.

The "barks" were looked upon at first as a chastisement for remissness of duty, and the only way to escape them was to engage in the holy dance. But, from being regarded as marks of guilt, these wretched exercises came to be esteemed "tokens of divine favor and badges of special honor."† With these manifestations the insanity reached its height in about three years after it began to show itself.

It was one of the popular beliefs of the times that certain instincts or conditions of the system would avert these nervous attacks. Thus it was held that a woman with a child in her arms or conscious of approaching maternity was in no danger. But there was no truth in the supposition. The maternal instinct, at least, had no effective efficacy. An instance is related where a woman mounted the stand with an infant in her arms, for the sake of a better prospect, and that being suddenly seized she fell backward, dropping her child. Some one fortunately saw the danger in time to seize and save the child before it fell to the ground.‡

A large proportion of the members of every congregation had power to resist the convulsive tendency. In a great majority no such tendency probably existed, but where there was a

\* Davidson.

† Ibid.

‡ Ibid.



conscious impulse toward the convulsions it could be restrained by most persons before it had been yielded to too long. Dr. Blythe had but little of the disorder in his church. He discountenanced the wild enthusiasm from the beginning, and threatened to have any one who became convulsed turned out of doors. The religious frenzy soon began to abate when the clergy set their faces against the stormy exercises. Rev. Joseph Lyle, on the second Sabbath of July, 1803, preached in his church a significant sermon on Order. The congregation had come together expecting the usual displays of feeling; but though some were angered by his doctrines, and some strove to promote the confusion of intermingled exercises, only a few "fell," and, altogether, moderation triumphed. This was the first sermon preached against the fanaticism.

It is a remarkable fact that notwithstanding the intensity and duration of this nervous disorder no instance is recorded in which permanent insanity resulted from it. Such results were to have been expected. Insanity is mentioned by Edwards as having attended the excitement in New England, and it may be that reason was dethroned in some whose cases have not become matters of history. In a few years, after a sounder public opinion began to assert itself, instances of the disorder had become rare; but it was many years before the epidemic entirely ceased.

As to its nature, there was but one opinion among medical men from the beginning. All referred it to a derangement of the nervous system. Dr. Felix Robertson, of Nashville, described the affection in his thesis, published in Philadelphia in 1805, as a form of chorea. In some cases it took the form of that disease; in others it bore a stronger resemblance to epilepsy; while in a greater number it partook rather of the character of hysteria. It was eminently sympathetic in its nature, as has been so often remarked of these affections. The convulsions once started in a congregation spread quickly through it, until all the fit subjects were convulsed. Repetition greatly increased the proneness to the disorder, which was invited by the masses on the supposition that it was a true religious exercise.

These perverted muscular movements all come under the head of morbid reflex action. By the continued religious fervor the central portions of the brain, the immediate seat of emotion and feeling, became inordinately excited. The impression, transmitted downward to the spinal cord, threw the muscles of voluntary motion into convulsions. Sensibility, which has its seat in the sensory ganglia, was generally annulled. When the hemispheres became involved the subjects fell into a state of unconsciousness or coma. In this abnormal condition of the nervous centers the bare recollection of the distressing scenes was sufficient, in many cases, to excite the convulsive movements. The former belong to sensori-motor actions. This last is an example of ideo-motor movement, instances of which are afforded by the act of vomiting, which may be caused by the recollection of disgusting sights or odors. The principle of imitation accounts for the rest. The great nervous centers in multitudes of people being in a state of polarity, any unusual exhibition of feeling would throw the more excitable into spasms, and the affection would then spread by sympathy, as hysterical convulsions and chorea are known to spread among girls at boarding-schools. And as fear has checked these, the epidemic convulsions were checked by reason and common sense, and finally ceased under the law which limits all violent action.

LOUISVILLE, KY.

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## MALARIAL INTOXICATION.

BY J. C. WATERS, M.D.

When selecting a title for the group of symptoms which I think ought to be classed under the above heading, I was induced to do so by the strong resemblance of their semeiology to that of the drunkenness produced by alcoholic liquors; used

to excess. A typical case or two will serve to illustrate my meaning.

On the 17th July last a man named J. Shaunnessy, aged about forty-five years, waited on me at my office as a patient. When he entered the room I observed that he staggered a good deal, as if under the influence of drink. His eyes appeared heavy and dull, his complexion was sallow, and his speech was not clear. I asked him if he had been indulging in ardent spirits or beer, and he replied that he had not during some months, but that he had had a severe attack of ague some time in the spring, from which he recovered about a month before his application to me. I asked him to walk the floor until I could mark his motion. It was decidedly as gyrating as it could be with the possibility that the man could maintain his equilibrium. I could not detect any spirituous odor upon his breath, and on examination found no appearance of congestion on the conjunctiva. He had no vomiting, no acid eructations. His appetite was good. His rest was equable and refreshing. He complained of no fever. His bowels were regular. He had no headache, and on first rising in the morning felt the slightest inconvenience. He complained of a sensation of vertigo, or, as he called it, "dull dizziness," which to him produced or seemed to produce the staggering gait with which he tottered when walking. He could walk rapidly without falling, and could shut his eyes and draw his heels close together. His tongue was clean, his appearance indicated him fairly nourished, and he had no noises in his ears (*tinnitus aurium*). He had not been lying in bed with his malaria, but had been around until he shook it off. He felt this dizzy sensation coming on by degrees, and it remained on him all the time now. He had been under the care of the dispensary doctors for his symptoms, but had not improved. He never had epilepsy; in fact, had no symptom to account for his condition. I turned my attention to his heart, which I found healthy, if I except a louder aortic bruit than usual, such as is found in aggravated cases of dyspepsia occasionally. He had noticed his condition in a few days after his

recovery from the attacks of ague, and it seemed synchronous with the intense heat. I directed him to go back to the dispensary, and wrote a note with him to state that I suspected there was some congestion of the vessels of the brain, with the suggestion that iodide of potass might be of use and tonic doses of some of the cinchonides. I saw him in ten days afterward walking better than before, but in a week or so I read in the newspaper that he had died suddenly. I had no opportunity to verify my diagnosis, as he had not been under my care. However, it awoke my attention to the subject of the possibility of malarial intoxication, and subsequent experience verified my observation.

The next case was one which occurred in the person of a gentleman whose habits are temperate. He had been annoyed with malarial attacks from time to time. He had paid careful attention to his health, and after a week's suffering usually got rid of them. On such occasions, however, he suffered much from biliousness, and afterward he enjoyed the best of health. His age was forty-five years—a well-built man, of clear intellect, and ordinarily ready of movement. He came to me in August, about the 3d, and told me he was "on a cheap drunk," to use his own words. I was surprised at his observation, when he drew my attention to his movements. He staggered not quite so much as Shaunnessy, but in just the same manner. He told me that as early as June, after a malarial attack that he had in May, he noticed some dizziness when he walked, but as it was slight he did not pay serious attention to it. He noticed that at night it troubled him a good deal more than in the day, and he did not wish to walk out alone then. Absorbed in a number of duties, he contented himself with some ordinary anti-malarial remedies, and took care that his bowels were regular. Never a capricious eater, he used only substantial and healthy food. But notwithstanding the regularity of his habits, never using tobacco, sober, and orderly in his hours of retirement, he was surprised that more or less he was troubled with dizziness. During a week or so he had, however, perfect freedom from it until the evening before he came to consult me. On that after-

noon he felt so well that he walked out in the evening, although it was in the heated term, and returned home in good spirits. He was speaking to his wife about the events of the day, when of a sudden he fell with his chair to the floor. He experienced no difficulty when he realized that he had fallen, but rose again and calmed his wife, who was much alarmed, and at the time found no dizziness. The sensation he felt was as sudden as a paralytic stroke, he said. The table near which he sat at the time appeared to turn over on him, as if he were falling through a pit whose roof gave way under him, and he explained his fall with the chair by the recollection that he endeavored to spring away from the table toppling over on him, as he thought. I prescribed for him, but he returned in two days after to tell me that he had had another sudden attack, in which he fell to the floor again from a standing position, but rose at once without difficulty. He has remained under my care since with the symptoms much moderated, as he never falls, although at times a temporary vertigo lasting about twenty seconds attacks him, and its violence is very limited.

These are two of the strongest types of a condition that springs from malaria, and of which with milder symptoms I have had no less than thirty-two cases under my treatment this summer. In all these thirty-two cases the condition of giddiness, the staggering gait caused by it, has been preceded by a malarial attack more or less severe, but invariably pronounced. In one instance I found a strange symptom produced, which was that when the finger was introduced into the right ear in order to plug it, as it were, the giddiness was produced. This reminded me, in its way, of Meniere's disease so-called, and further analogies to the same form of symptoms could be noticed.

I had supposed that the extreme heat had much to do with this condition, but since the temperature has become moderated cases present themselves as frequently, not indeed taking the typical form of the extreme cases which first attracted my attention to it, not presenting that apoplectiform character of seizure which is so alarming to the patient, but decidedly showing the

intoxication which I found difficult to treat. I will not here discuss the question as to what portion of the brain or of the medulla oblongata was the seat of the attacks. For the present I merely give the symptoms of this very alarming form of the sequela of malarial influence, reserving for the future my opinion as to the causes of its production, the question of treatment being for the present the most important.

Trousseau, whose very accurate observation led him to employ valerian in forms of vertigo, in his work on therapeutics published in Paris in 1869, gives very full testimony as to the value of that drug in those obscure cases, uncombined with the apoplectic diathesis, which occur sometimes in every body's practice. Of course therefore I tried valerian in the instances of the lesion which first came under my notice, rather as a palliative of the urgent symptoms than with any hope of its stable efficacy. It justified my expectations on this score. But there was a step further to be made, for the symptoms, though they were abated, remained. In this juncture the pages of the distinguished Bretonneau offered a resource for information not to be overlooked. In his well-known paper on Lesions of the Functions of the Brain he shows the close connection between the condition of the stomach and brain-symptoms in certain states of the former organ. He testified that in a large number of cases the vertigos which he was called on to treat were accompanied by palpitations of the heart, a sensation of syncope, and acid eructations—symptoms showing in themselves much dyspeptic trouble. In those cases he tried the effect of his well-known formula of a powder composed of 15 grs. bicarbonate of soda with  $7\frac{1}{2}$  grs. carbonate of magnesia, given three times daily for five or six days continuously, followed at their end by an infusion of quassia formed by the deposition of 30 grs. quassia in half glass water for twenty-four hours, and taken after the two principal meals. I tried this plan of treatment also, with results only half commensurate with success.

I had previously formed the opinion that iodide of potassium was the most valuable agent that could be used in these cases,

from the gravity of the cephalic symptoms, and I considered that a combination of the treatment of Trousseau and Bretonneau, together with that valuable medicine, would meet every exigency of these cases. I therefore placed my patients on the bicarbonate of soda with magnesia, with the infusion of quassia and fluid extract of valerian after the first day. At the close of four or five days I omitted the soda and magnesia, which I directed always to be used before meals, and substituted for it the formula of a prescription published in 1864 and 1865 by Dr. Brown-Séquard as follows:

R Sodii iodidi, . . . . . ʒ ijss;  
 Soda bicarb, . . . . . ʒ j;  
 Infus. calumba, . . . . . fl ʒ ij;  
 Tinct. rhei, . . . . . ʒ ij. M.

S. A teaspoonful and a half three times daily before meals, with a little water.

This formula, it will be seen, is the most active shape in which the iodides can be used, and with the quassia and valerian after meals has been the most effective in my hands in these cases. In such of them as showed a recurrence of malarial symptoms I suspended the treatment for a time, attacking the paludal fever by arsenic, and in one case alone so far have I not fully succeeded. I am inclined to think that like Meniere's disease in 1872 this was somewhat epidemic in the present year, and may well be watched in the future.

INDIANAPOLIS.



A RÉSUMÉ OF RECENT PROGRESS IN OBSTETRICS  
AND DISEASES OF WOMEN AND CHILDREN.\*

BY EDWARD ALCORN, A.M., M.D.

This retrospect is necessarily brief. I have searched with some care a few of the periodicals of the day, and have embodied in this report some of the ideas of a few of the leading gynecologists in this country and abroad upon subjects bearing directly upon the subject assigned to me.

At a late meeting of the Obstetrical and Gynecological Society of St. Louis the management of the cord after delivery was fully and interestingly discussed. Dr. Moses mentioned in a very pleasing way the method of Dorhn, of Vienna, to show the absurdities sometimes reached by scientific men. He ties the cord several inches from the body, washes it with carbolized water, ties it with a carbolized ligature, and a carbolized compress applied; this to remain seven days, then removed and antiseptic dressings renewed. He prefers Goodell's plan—let it hang free and unbound, exposed to the air.

The text-books, as a rule, direct that the cord should be cut as soon as the child cries lustily and breathes freely.

Some authorities now contend that the child after birth receives a certain quantity of blood from the placenta which is essential to its well-being; that from two to three ounces of blood are squeezed through the uterine contractions into the vessels of the child, aided by the suction-force of the respiration.

Hofmeier, of Berlin, instituted thirty-two experiments, placing the child after it was born and before the cord was tied on delicate scales to note its weight then and also the change in weight after some minutes had elapsed. The result was an average increase in weight of two ounces. In order to get the full benefit of this "reserve blood" this author contends that it is best not to tie the cord until the placenta is expelled by the

\* Read before the Central Kentucky Medical Association, October 19, 1881.

uterus. Should it be suddenly thrown off with the child, the placenta should be squeezed with the hands to give the child the benefit of all the blood physiologically belonging to it. If the cord be cut early and allowed to bleed, a condition of anemia is set up, which tends to lessen the sensibility of the medulla. When the cord is cut late the child begins with an extra supply of blood in the system, which is adequate for its wants until milk is secreted.

Sweifel, of Erlangen, asserts that children in whom the cord is tied late thrive better, are heavier at the end of a week than those whose cords are cut immediately after birth. These recent methods of treating the funis have always been practiced by the frontier savage; so says Dr. Engleman, of St. Louis, whose knowledge of their habits and customs is superior to that of any medical gentleman of whom I have read.

Dr. Madden, of Dublin, before the Obstetric Section of the late International Medical Congress at London, spoke encouragingly of the efficiency of perchloride of iron in arresting post-partum hemorrhage. In a practice of more than twenty years he had seen only one death from this cause. According to his experience the great majority of the cases of post-partum hemorrhage occurred in multiparæ, and the probability of its occurrence was in proportion to the number of the patient's previous confinements. He urges in such cases, where there is any reason to anticipate hemorrhage, that the membrane should be ruptured as early as possible during labor, so as to allow the uterus to contract gradually and firmly. A dose of ergotin or a dram of fluid extract of ergot should be injected hypodermically before the head begins to press upon the perineum. As a prophylactic of hemorrhage he thought a course of any astringent preparation of iron, given during the last months of pregnancy, was emphatically useful. The injection of hot water into the uterus was only beneficial in those cases where the vital powers were lowered by excessive hemorrhage. He had no faith in the injection of ice-water or blocks of ice passed into the cavity. His method was to saturate a sponge in a solution of perchloride of iron and

pass it into the cavity, and there held by the hand until uterine contractions forced it and the hand out into the vagina. With reference to collapse from excessive hemorrhage, he thought transfusion useless, but advocated the hypodermic injection of ether, as suggested by Von Hecker. With it his experience had been most gratifying.

On the 26th of March last a woman at full term was brought into the wards of Von Hecker in extreme collapse, with all the objective signs of ruptured uterus. The child was delivered, and a vaginal examination disclosed a large rupture in the cervix, penetrating through all the coats. It was large enough to admit the hand into the peritoneal cavity. The fingers were introduced through the rent, following the cord to the placenta, situated on the left side, and was readily extracted. The day following the abdomen became very painful and tympanitic, and excessive vomiting of green fluid followed. Thirteen hours after delivery a drainage-tube was introduced, allowing a considerable quantity of bloody fluid to come away. The bladder was emptied by catheter. Iced compresses and opium were used without stint. The temperature did n't rise above 98°, and in two weeks the rupture was firmly cicatrized. The simplicity and applicability of this method of treatment is suggestive. Drainage is the cardinal point in the treatment of such accidents.

At a recent meeting of the Royal Medical and Chirurgical Society of London Mr. Spencer Wells read a paper summarizing the results of two hundred cases of ovariectomy, completing one thousand cases under his care. The mortality of the ninth series of one hundred cases was seventeen; that of the tenth, eleven. Of the thousand cases two hundred and thirty-one have died. The mortality has steadily diminished from thirty-four in the first hundred to eleven in the last. Since the eight hundred and eighty-eighth case all the operations have been in private practice, and all have been done antiseptically. Mr. Wells inquires how far this lessened mortality was due to antiseptic precautions or to improvements in the mode of operating. He stated that he formerly had cases whose temperature reached 104° and

108°; now in an entire year he had seen no case whose temperature arose above 101°.

At a meeting of the *Société de Biologie* M. D. Sinety reported having had opportunities to make a number of autopsies on women who died during menstruation, and that he found the mucous membrane intact. He examined carefully too all fluids expelled during menstruation, but was not able to detect the slightest trace of corpuscular elements of the mucous membrane. He concludes therefore that desquamation of the uterine mucous membrane—a process assumed by many to be a physiological one—does not occur during menstruation.

Recently before the Obstetric Society of Dublin Dr. Smiley read a paper upon Utero-vaginal Injections in Childbed. He said that it was a practice of great antiquity, but of late years its employment exceeded that of former times. The reasons were twofold. First, the accepted dictum of Semmelweis that "puerperal fever was, without exception, a fever of absorption of decomposed animal organic matter," which led to a belief in the identity of that fever with septicemia and pyemia. Second, the wonderful power of so-called Listerism in preventing the diseases in the field of general surgery, which leads to a desire for the employment of similar antiseptic precautions in childbed. In a few words he deprecates its universal use for the reasons simply—First, owing to the high state of nervous excitability at the time of parturition the irritation often produced fits of hysteropileptiform convulsions, ending even in death. Second, the displacement of uterine thrombi, causing hemorrhage. Third, overdistension of the uterus, causing inflammation or possibly the escape of fluid through the fallopian tubes into the abdominal cavity. Fourth, by the entrance of air into the uterine sinuses. He admitted that in a certain number of cases, especially those in whom there was already gangrene, decomposition, or formation of gas going on in the uterus, it was most desirable. When such measures were necessary the common irrigator should be used, with metallic tube and stop-cock. All pumping syringes should be avoided.

Bearing directly upon this subject, Dr. J. M. Dennison in a late number of the Medical News reports the death of a patient in five days after using a vaginal injection of the infusion of tannin with an ordinary syringe. Acute peritonitis was the cause.

At the July meeting of the Medical Society of the County of Kings Dr. Burge made some very pertinent remarks upon The Placenta as a Tampon. His experience and observation lead to the belief that post-partum hemorrhage resulted more frequently from the early delivery of the placenta than from any other cause. He argues that if there is no pain and no plain reason for interference for the woman's safety make no traction upon the cord, no search for the placenta edges, no officious meddling of any kind. See that the uterus is well contracted, and it will remain so if the placenta is let alone. It is time to interfere when the first shock of labor is passed. If the placenta is in the womb its presence there is the best possible stimulus to contraction—better, he thinks, than one's hand; and if from any degree of inertia the womb is not disposed to contract, then the placenta (if detached) is the best possible tampon. He emphasizes this point, viz. that the placenta is the best and only tampon suited to the post-parturient condition; that after the complete separation, before it leaves the uterus or before it leaves the vagina, it possesses all the qualities of an unirritating, smooth, soft, and yet sufficiently firm barrier to the effusion of blood. Extract it before the time, and you have lost an advantage that you can't regain.

Dr. Webster Jones, of Chicago, as chairman of the Committee on Obstetrics, closed his report to the State Medical Society of Illinois with the following valuable aphorisms:

1. An intelligent confidence once thoroughly established between patient and physician does much to banish the terrors of the lying in room.
2. It is possible to foresee and prevent the appearance of the most fatal form of eclampsia gravidarum.
3. Cleanliness is especially next to godliness in the case of

the accoucheur. Its absence renders one liable to professional homicide.

4. Modern midwifery must not be meddlesome, but must be mediatorial in the sense of palliating suffering, expediting nature's processes by well-proved means, and removing scientifically all inexplicable, accidental, or morbid states and conditions. Idleness is no longer an approved qualification for a degree in obstetrics.

5. The hand is the best uterine dilator.

6. The forceps should never be used until the os uteri is dilated or dilatable, and then not unless the membranes have been ruptured and labor delayed unnaturally for at least an hour. Every doctor should become skillful in their use, and they should never be left at home for fear of temptation.

7. Unnecessary and avoidable delays in labor are fruitful sources of gynecological practice. They promote inflammation and sepsis.

8. The patient's hopeful confidence and the physician's industrious attention actually contribute to the physiological elements of labor. Anesthetics here are, to say the least, superfluous.

9. Bimanual aid in effecting the delivery of the placenta is not only proper but advisable. Skillfully rendered, the "cry of uterine inversion" becomes no longer a bugbear.

10. The continuous and intelligent counter-pressure over the fundus uteri during the child's exit, the delivery of the placenta, and the period of frequent oscillation, be that a shorter or longer time, is a safeguard never to be neglected.

11. Pursuant to the same end, the application of the bandage and its continuance as long as the uterine globe can be felt and embraced by it above the pubis contributes not only to the comfort but to speedy involution. After the seventh day close pressure must be interdicted.

12. Puffiness of one ankle, with tenderness of the corresponding groin, and an abnormally quickened pulse, with or without copious sweating noticed within the first ten days after

labor, betoken the presence of phlebitis, and the possibility of an embolism or thrombus, and resultant sudden death.

13. The duties of an obstetrician are not excluded until a careful examination from six to eight weeks after parturition proves the integrity of all the organs concerned.

Before a late meeting of the Medical Society of the County of New York Dr. Charles C. Lee read an elaborate and well-prepared paper upon the Laceration of the Cervix, which elicited a long and interesting discussion by Drs. Emmet, Pallen, Mundé, Putnam, Jacobi, Wylie, and others. To sum it up, the paper and discussion amount to this, viz. that there is a tendency on the part of the leading gynecologists to narrow the scope of uterine trachelorrhophy rather than extend it. A reaction has set in, and conservatism is now the order of the day.

Dr. Emmet has taken a step in advance by abandoning the theory that the evil effects of lateral laceration are due to erosion produced by the weight of the uterus pressing the two lips down against the floor of the pelvis, and so spreading them apart.

It is narrowed down to this: As a rule, laceration of the cervix is of no lasting pathogenetic significance, except in so far as it serves to keep alive the embers of an old peritoneal or cellular tissue inflammatory process. In a certain proportion of cases proper treatment will cure the latter without any attention being paid to the laceration itself. When it fails you may know that the laceration is a hindrance to success, which can usually be remedied by the simple operation devised by Emmet.

During the same meeting and following the same discussion Dr. Polk urged that doctors might prevent many lacerations of the cervix by not rupturing the membranes until the os was fully dilated; that it was the rapid descent of the head through a contracted os that caused this fracture. Preventive measures should be more thoroughly studied.

Dr. Schultze, of Jena, has proposed a new method of diagnosing chronic endometritis. He uses a tampon of cotton soaked in glycerole of tannin applied directly to the cervix. It



is allowed to remain twenty-four hours, and he then removes it. On the spot corresponding to the *os* he usually finds a lump of pus not transparent, but of a more or less greenish color, which serves to distinguish it from the ordinary cervical mucus. When the endometritis is accompanied by catarrh of the cervix pus is found in intimate admixture with tenacious mucus of the latter, while when confined to the corpus uteri the pus produced remains separate.

Dr. Martin, of Berlin, adopts quite a sensible method in operating upon the uterus, vagina, and perineum. Instead of keeping the surfaces clear of blood by sponging, as is usually practiced, he employs constant irrigation. A bucket or tub holding several gallons of water carbolized stands at the side of and above the operating table. With the aid of a rubber-hose water is continuously conveyed to the wound. The constant stream not only disinfects the parts, but washes away all septic discharges that may be present, and has a tendency to check the bleeding in some degree.

In hysteria and epilepsy bromide of ethyl has lately been employed by many practitioners with the most satisfactory results. There is a future before it.

Dr. Paton reports in the British Medical Journal a case of croup which he claims to have cured by means of a soft catheter introduced into the trachea by the mouth, instead of doing a tracheotomy. He thought the case would have ended fatally without an operation. Tracheotomy seemed inadmissible. Neither the case nor the surroundings were favorable for it. When the tube had been in forty-eight hours it was removed, and at the end of the third day the child was able to breathe freely without the tube, and was entirely well the tenth day after the operation.

Drs. Lohtman and Rotenhoufer, of the Children's Hospital in Breslau, report good results from the use of *resorcine* in the treatment of cholera infantum. Emesis is promptly arrested by it, and in minute doses the symptoms of collapse are ameliorated and diarrhea becomes less frequent. It is an anti-zymotic with-

out irritating properties. Patients take it well and the stomach tolerates it kindly. Its action usually appears in two days and a cure usually in six days. The dose is from ten to thirty centigrams.

Prof. Loshkewitz has crucially tested pilocarpin in the treatment of diphtheria, as recommended by Dr. Guttman. He used it in ten cases. Their ages ranged from two to seven years, and the disease when the treatment was adopted was in the first and third days. All the cases died. Dr. Guttman claims that the profuse salivation separates the membrane and arrests the extension of the disease.

Dr. Waschman had better results after using it in severe cases. He considers the remedy a dangerous one, as it produces a marked depression in the strength. He suggests that it be used conjointly with stimulants.

HUSTONVILLE, KY.

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## DILUTE ALCOHOL AS A DRESSING FOR WOUNDS.

BY LEVIN J. WOOLLEN, M.D.

At the late meeting of the International Medical Congress, Dr. Thos. Keith, of Edinburgh, declared against the use of antiseptic dressing,\* admitting that three cases of carbolic-acid poisoning had occurred in his practice. The high reputation of Dr. Keith as an ovariologist gives great weight to his opinions. Even Mr. Lister seemed to be in doubt as to the beneficial effects of carbolic-acid spray in abdominal surgery, and admitted that there were objections to the use of carbolic-acid dressings.

\*Dr. Keith declared against antiseptics in the operation of ovariectomy alone. In the dressings subsequent to this operation he advises their use, and in all other operations still uses them.—D. W. Y.

The practice of applying a solution of carbolic acid to wounds of various kinds is certainly very general among practitioners in this country. My limited experience in surgical practice leads me to believe that as ordinarily used, at least, it is of but little benefit, and, in fact, of less utility than many other remedies. Indeed I may say I have never used it with satisfaction to myself, and during the past few years have dispensed with it altogether.

Many years ago I read in the London Lancet that dilute alcohol, with the addition of laudanum when pain was present, was used in one of the London hospitals as a dressing to stumps of amputated limbs. Since that time I have used dilute alcohol as a dressing to open wounds in preference to any other means. The result has in each case been satisfactory to me. Pain and swelling are moderated by its use, while suppuration is usually reduced to a minimum.

A year ago my partner, Dr. A. G. Craig, and I removed from the arm of a female a large fatty tumor weighing over a pound and a half, closely adherent to the deeper structures of the arm, and requiring some dissection to separate it from its bed. No water was used about the wound except that which had been previously boiled, and the sponges were placed in boiling water before using. The wound after being closed was kept constantly wet with dilute alcohol. No suppuration occurred in the wound, which healed kindly and speedily. One or two little pustules showed themselves near the cut, but were superficial—merely under the cuticle—and had no connection with the wound. The patient was not a healthy one; indeed her case was so unfavorable for an operation that we postponed it for two weeks, meanwhile putting her upon proper treatment. She had loose, flabby muscles and that peculiar pallor of countenance which denotes impoverished blood.

To remove any impurities contained in the water, we had the water boiled in order to destroy the organisms contained in it. In addition to boiling the water I think it would be well also to filter it before washing out fresh wounds.

Alcohol is one of the best preservatives of animal tissues that we have. It is also destructive of bacteria, while, unlike carbolic acid, it is not a poison, and no harm can come from its application to raw surfaces.

VEVAY, IND.

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FOREIGN CORRESPONDENCE.

*My Dear Yandell:*

LONDON, November 15, 1881.

If the prognostication of the Italian organ-grinder that the end of the world is to be this month be fulfilled, this letter will never reach you. We have, however, heard so many similar prophecies of late that a credulous public is beginning to be just a trifle incredulous concerning them. It is quite time that every one who prophesied the end of the world was relegated to the peaceful seclusion of a lunatic asylum; for though such predictions are treated as a joke by all rational people, yet they have often a most injurious effect on the minds of the weaker and more excitable portion of the community.

There have been numerous tirades under such headings as "Miscarriage of Justice," "Unjust Judges," etc., in the medical journals here, against the judges who awarded the prizes at the International Medical and Sanitary Exhibition at South Kensington. The *Lancet* says that the complaints are as justifiable as they are serious, and that it is equally impossible to find a satisfactory reason for some of the errors of omission and commission. One of the strangest blunders of all was made by the executive committee, who actually allowed one of the judges to adjudicate on articles for which he is the English agent—a blunder which has become a scandal from the fact that these articles received an award; and when we add that these articles were a "secret worm-powder" and an "oriental balsam," neither of

which ought ever to have been admitted to the exhibition, it is evident that we have here a miscarriage of justice which calls for instant correction. But almost as bad as this is the omission to give awards to some of the best drugs that were to be found in the exhibition. The British Medical also says that in some of the awards no principle is apparent, and it is clear that some of the most remarkable and valuable preparations have failed to win the approval of the judges. In this respect their decisions are palpably contrary to common sense, and to the verdict of the profession and of any one who will take the trouble to inquire. It remains for the members of the jury to explain why they passed over products of the highest pharmaceutical merit and why they gave high awards to certain trumpery secret preparations. It is certainly a matter requiring investigation how such articles gained access to the exhibition as a certain chemist's "certain cure for putting an end to tape-worms," and the same exhibitor's "miraculous balm, specially recommended to the ladies for correcting natural imperfections and the blemishes caused in the fair sex by the wear and tear of time, and which may be used on every part of the body to which cold cream is usually applied"; for Rule 8 orders that "Every article exhibited shall bear a descriptive label containing detailed information respecting its constitution, construction, and use. No secret preparations will, under any circumstances, be exhibited."

Richard Davy, M.B., F.R.C.S., surgeon to the orthopedic department of the Westminster Hospital, gave a very interesting clinique on resection of the tarsal arch in cases of intractable clubfoot. He showed several boys upon whom he had operated for the deformity, and plaster casts to show the condition before operation. As an example of the operation I can not do better than give you one of his cases as he himself described it.

*Talipes Equinus, Left Foot.*—J. B., aged twelve, admitted on June 22, 1881.

I met this boy in St. James's Park. My attention was drawn to his crutch and his progression on the dorsum of his left foot. The

boy gave me his correct address, and his mother readily sanctioned her son's admission into Westminster Hospital.

At three years and a half old his mother noticed that the boy walked lame, but there was no history of a fit; if any happened, it must have been nocturnal. At four years old he had measles in the Highgate convalescent home, and lost the sight of his left eye. His left foot had steadily become worse; there was wasting of the leg and gradual shortening. He had been treated twice in the Great Ormond Street Hospital, twice in Westminster, and twice in the Victoria Hospital for children. He had been freely tenotomized and galvanized.

On admission, it was seen to be an extreme case of left talipes equinus. The boy hobbled on a crutch, and supported partially his weight on the dorsum of the foot, over the summits of the metatarsal bones. The phalanges were all rigidly flexed. There were three large indurated corns and general thickening over the dorsum of the foot. The leg and foot were wasted, and there was shortening of the left leg to the extent of one inch. He had some old rubeolous scars over his trunk, arms, and legs. There was opacity over the lower segment of the left cornea. The sight of the eye was lost, but the globe was of the natural size.

On June 25th I resected this boy's transverse tarsal arch by means of a saw and a director. I dissected out a wedge-shaped piece of skin from the inner and outer sides of the left foot. With a blunt periosteal curved knife I freed the tendons, artery, vein, and nerves, so that the director could be freely passed between the bones of the tarsus and the important soft structures on the dorsum. The director was held by Mr. Butler as a retractor. The probe-ended saw was slid along the groove on the under aspect of the director, and an accurate wedge of bone was sliced out and readily removed by a pair of bone-forceps. The wedge included slices of the astragalus, os calcis, scaphoid, and cuboid bones. The base of the wedge was of course at the dorsum, the apex toward the sole. Natural contour was gained, and the foot was put up in a splint, and gum-and-chalk bandage applied over it. No dressings were used, but a daily wash of carbolized water.

August 11th. The boy's convalescence had been absolutely perfect. His foot and toes were at right angles to his leg. He left his bed today and was measured for a pair of ordinary boots, the sole of the left boot to be one inch higher than that of the right. A small granulating wound existed over the outer side of the foot.

August 23d. He put on his new pair of boots and walked up and down the ward, assisted by holding one hand of the nurse. It was the first time he had walked on the sole of the left foot for six years.

Another death from hydrophobia has occurred here. A spirit-merchant was bitten in the hand three months ago by a retriever. The dog had been bitten three months before by a small rabid dog. The merchant's wound was cauterized. On Monday he experienced pains and stiffness, which were attributed to cold, but on Wednesday he became unable to swallow liquids, and on Thursday he died. The case shows the great importance of destroying every dog bitten by another known or suspected to be suffering from rabies. It is only thus that serious outbreaks can be prevented.

The daily press a few days ago described a struggle between a policeman and a ferocious dog. There is no evidence, I believe, that the dog was rabid, but the occurrence has brought on the constable a flood of suggestions to prevent him from being attacked with hydrophobia. A clergyman gives him the advice, spirituous rather than spiritual, to get drunk upon whisky—a proceeding which, in conjunction with a warm bath, “will certainly cure the bite of a dog, whether mad or not.” Another disinterested individual offers an infallible specific at five dollars a bottle. A lady advises the treatment which was effectual in the case of a lady friend. The sufferer's husband took her into a hall, locked the doors, and with a whip compelled her to run round the hall until she fell exhausted. Another consoler assures the policeman that he will lose his life unless he takes Turkish baths. A gentleman sends a specific which has been in his family for three hundred years, though what precise effect it has had on his family he omits to mention. The case of the policeman is admirably suited for the use of these excellent preventives of hydrophobia; for, being apparently in no danger of the disease, no remedy suggested can fail to preserve him from death.

The members of the Pathological Society a few days since enjoyed the rare opportunity (in this country) of seeing the *filaria sanguinis hominis* in the living state from a patient in the London hospital, suffering from hemato-chyluria, under the care of Dr. Stephen Mackenzie. Briefly, the facts known about the blood-worm and their bearing on the pathology of obscure lym-



phatic disease are as follows: The parasite presents an example of the alternation of generations, requiring two hosts for its complete development. The minute, almost structureless worms found in the blood of the human subject in such vast numbers are the embryonic forms of the filaria, which requires the mosquito in which to develop into the sexually-mature worm. The mosquito, feeding on the blood at night, when the filaria are generally alone to be found, becomes gorged with them. Their growth in the mosquito has been traced by Lewis and Manson, and it is presumed that they are only liberated from the body of their host by its death in the water, to which it always finally resorts. The hematoid is thus set free, and probably undergoes further development; for the mature worm measures some three inches in length. Its passage into the human body is easily explained, and the analogy in this respect with the guinea-worm is one which Dr. Vandyke Carter ably illustrated. Once within the human body, the worm lodges in the tissues; but as to its migrations, and, indeed, its ultimate resting-place, but little is known. It seems, however, to have a peculiar aptitude for selecting the lymph-channels for its habitat—a selective power not more remarkable than that which urges the trichina to select the muscular tissues. This is further borne out by the fact that its embryos—the *filaria sanguinis hominis*—are met with in the blood and urine of the subjects of chyluria and nevoid (or lymphatic) elephantiasis.

The precise mechanism of chyluria still requires to be explained, and until it is elucidated an important part of the subject will remain obscure. Dr. Mackenzie hardly touched upon the pathology, limiting himself to the statement of the facts observed in his case, the most important in connection with the urine being that besides having all the chylous properties it invariably contained more or less blood, that passed by day containing more blood and filaria, that passed by night being more milky; and that filaria were found in it, especially in connection with blood-coagula. The most remarkable feature of the whole case lay in the periodicity shown by the filaria in the time of their appear-

ance in the blood. During the whole period of the man's stay in hospital his blood had been examined regularly every three hours, with the constant result that by night the filaria abounded, by day were entirely absent. It is certainly singular that the time selected by the mosquito should correspond with the presence of the parasite in the blood-stream, and the connection of these two facts is not the least wonderful in the life-history of the parasite. Dr. Mackenzie found that the ingestion of food bears no relation to the presence of the parasite in the blood, but that the time of rest and sleep does; for when the patient was up all night and slept during the day the period of filarial migration was similarly inverted. Dr. Mackenzie did not venture to speculate on these curious points; he wisely contented himself with laying the facts he had observed before the Pathological Society; and we may congratulate the society upon having had the advantage of this valuable demonstration upon a class of diseases seldom met with in this country, it is true, but the study of which may throw light on other obscure affections, and enlarge our conceptions not only of the manner in which parasites may infest the human organism, but of the remote effects their presence is capable of producing.

There is an interesting case described in the British Medical by Alban Doran, F.R.C.S., of hydro-peritoneum, traced to chronic ovarian disease, with recovery after the operation of oöphorectomy. The case was as follows:

E. M., aged twenty-three, single, was admitted to the Samaritan Free Hospital. Nine weeks previous to admission her abdomen began to swell, with slight edema of the lower extremities. In the course of a month the abdominal distension had increased so as to cause dyspnea. The abdomen was tapped, and four and a half gallons of fluid were drawn off. Within a week the abdomen was again considerably enlarged. There was no sign of cardiac or pulmonary disease; neither was there cough nor any form of rheumatism. Her appetite was good, her tongue clean, and her bowels acted without the aid of drugs.

The case being so obscure, Dr. Bantock determined to make an exploratory incision—the more since previous paracentesis had proved of no permanent benefit. A weak solution of phenol (one in fifty) was employed in the form of a spray. On making the incision twenty-

two pints of ascitic fluid escaped. The liver was found quite healthy to the eye and the touch, the kidneys were not enlarged, nor was there any tumor of the abdomen or pelvis. It must be here noted that menstruation, which commenced at fifteen and continued with perfect regularity for two years, had ceased entirely for six years. This had led to a suspicion of ovarian disease existing as the cause of the ascites. At the operation, to quote Dr. Bantock's notes, "Both ovaries were in their natural position, and not enlarged, or, if so, very little. But their peculiar condition arrested my attention. Their surface was very irregular, hard, and warty. On bringing them into view they were much paler than natural, and on palpation presented a semi-cystic character. Could this be the cause of the ascites? There could be little doubt that this condition was connected with the absence of menstruation. I determined to remove the ovaries. The pedicle was rather short, and on drawing the right ovary into view the outer edge, consisting of the two layers of peritoneum, was very tense. I first secured this with a fine (No. 1 silk) ligature, and then transfixed and tied in two with No. 3 silk, the outer transfixing silk being brought round the ovary after the pedicle was cut away. The left ovary was treated in same manner, but owing to its close connection with the sigmoid flexure its removal was attended with greater difficulty." A drainage-tube was introduced, and the operation was completed. Operation lasted an hour. After three quarters of that time the spray failed, and was not replaced for five minutes, the operation being continued in the meantime. For several days much serum escaped from the drainage-tube. The temperature never rose beyond 100.6° F. The tube was removed on the sixth day, the first stitches taken out on the ninth. A fortnight later the patient returned home.

It is now seventeen months since the operation. There has been no return of the ascites. The patient is well, and does her work without trouble. She has had no menstrual discharge.

There can be little doubt that in this case ascites was due to inflammation of the pelvic peritoneum, and there is strong evidence leading us to believe that the process commenced in the ovaries. Pathologists are chary of admitting the possibility of ascites from primary inflammation of the peritoneum, and few would admit that such inflammation could give rise to effusion filling the peritoneal cavity to the extent seen in cardiac disease, in cirrhosis of the liver, and in this instance now under our consideration.

An amusing little work has been brought out by Milner Fothergill, M.D., on *Indigestion and Biliousness*. The subject of indigestion has always been a favorite one to write about, and with the classic writings of Murchison and Wilson Fox before us we should have thought that even Dr. Fothergill might have failed to suggest a new line of research. The author has undertaken, however, to treat the subject from a physiological point of view, which has not been done before. Dr. Fothergill classifies indigestion under three heads: (1) Primary, (2) Secondary, (3) Intercurrent. We have accordingly only to determine which form of impairment is present, and our course of treatment at once becomes clear. Unfortunately, however, although Dr. Fothergill entices us on by the delightfully easy paths of imperfect disintegration of food, defective solvent power of juices, etc., he does not give us distinct clinical directions by which we may determine which form of impairment is present. The work is flowery in the extreme; for in the first page and a half on Intercurrent Dyspepsia the reader has presented to him (1) a bright summer day, (2) a passage from the life of Elijah and Ahab, (3) the fate of the Eurydice, (4) a typhoon, (5) the stormy petrel, (6) the gallant captain of a craft in danger furling his topsails, (7) the experienced general outwitting a flank movement. Truly the author must have a fertile brain to bring all these similes to bear upon the subject of indigestion. I doubt very much whether even his versatile intellect would have expanded in this gorgeous manner if his own stomach had been out of order at the time when he was writing these descriptions. Such is the intimate connection between a man's stomach and his brain.

Your fellow-countryman who predicted the terrible storm we had here last January has been good enough to promise us a cyclone at no very distant date. I am sure we are all greatly indebted to him for his kindness, for he gives us the pleasure of anticipation when any horrible weather is coming. I have never yet known him promise any sunshine, and it is indeed some time since we have seen any thing of the sun. November fogs are now the order of the day.

## Reviews.

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**Rheumatism: Its Nature, its Pathology, and its Successful Treatment.** By T. J. MACLAGAN, M.D. London: Pickering & Co. 1881. 8vo. Pp. 333.

"In my own practice I have come to regard a case of uncomplicated rheumatic fever, in which the pain is not quite gone and the temperature at the normal within forty-eight hours of the time that treatment commences, as an obstinate one, and the cases are few in which the pain is not decidedly relieved within twelve and abolished within twenty-four hours of such time." This from page 14 of Dr. MacLagan's book is a pregnant paragraph. For a generation a real or putative London practitioner has been held to an immortal fame because when a junior asked him "what will cure rheumatism" he answered, "Six weeks," the brilliant point of the senior's laconic wit being its veracity. To the professional man who has not revised his studies nor his practice in rheumatic fever for six years, the quoted paragraph will contain a revelation of marvelous progress. It is twenty-nine years since Fuller issued his book advocating and delineating the alkaline treatment of rheumatic fever, and it then seemed like the promise of a boundless blessing; and truly it has been a blessing, only it has not been boundless. And now, if our author is not mistaken, he has wrought out a remedy for the same agonizing disease that we may place fully as much confidence in as we do in quinia for intermittent fever, not claiming that he has discovered a catholicon, but a specific for acute uncomplicated rheumatism. And he has a reason for the faith that is in him.

Dr. MacLagan presents four eminent positions: First—and this is a negative one—that the essential cause of rheumatism is not lactic acid; second, that the essential cause is malaria;

third, that the effective element in malaria is an organic germ; and fourth, that the reliable germicide for this species is salicin. He does not deny the presence in the system of the rheumatic of an excess of lactic acid, and he admits that such excess is not a phenomenon of any other disease; and he further acknowledges that experiments have shown that lactic acid injected into the systems of the lower animals is followed by inflammatory changes similar to those that occur in acute rheumatism, and that the administration of lactic acid to man has been followed by symptoms undistinguishable from those of acute rheumatism. But by the recital of established facts and a line of close logical reasoning he carries conviction to his reader that these truths do not establish the causation of rheumatism by the acid, but, on the contrary, that the pathological activity of rheumatism is the generator of the excess of acid which becomes a marked feature of the disorder when seeking exit from the system through normal channels, the chief of which is the skin. This is upsetting a theory very generally accepted by the profession; but nevertheless, without attempting to follow him in his line of demonstration, it is safe to say that he has given the *coup de grace* to the famous doctrine of Prout.

Two varieties of pathological poisons are especially dwelt upon by Dr. Maclagan: one—contagia—is generated within the human system from antecedent germs, which are reproduced therein, are given out in some form, and, being communicated to a susceptible human, reestablishes the disease in him; the other—malaria—of exterior origin, is received into the system, and, finding a congenial nidus, is reproduced, but not in a style to be communicated to other humans. Both these poisons are, in his estimation, organized germs. He reaches this conclusion not by actual demonstration, for he acknowledges that they are in dimensions below our plane of vision assisted by the completest optical aids, but by a course of reason founded on their manifestations and obedience to known laws which excludes them from the category of mere chemical compounds or simples. In 1876 Dr. Maclagan published "The Germ-theory

applied to the Explanation of the Phenomena of Disease," a work in which he undertook to show that all specific fevers are caused by the reproduction in the system of germs entering from without. This work excited much comment, and while many sound pathologists accepted his arguments as conclusive and others totally rejected them the great body of the profession merely said "not proved," and left the question open for further light. The chapters in the present volume devoted to this theory are a fresh assertion of his former positions, strengthened by such new facts and thoughts as the intervening years have afforded. These do not, however, conclusively settle the question in his favor, notwithstanding the germ-theory satisfies more conditions than any other yet promulgated.

Touching malaria, the author holds that there is sufficient ground to believe that the germs constituting it spring out of uncertain dead and decaying vegetables with a certain environment of humidity and heat, and these germs must exist in at least two forms, one producing intermittent fever and its congeners, and the other rheumatism. The germ in such case he denominates the first factor of the disease, and the second factor in each case is the nidus within the system wherein the germ finds the conditions permitting its own multiplication. In rheumatism this nidus is the white fibrous tissue, and not all white fibrous tissue either, but that which is subjected to the greatest strain in the performance of its normal function, found in fullest development in connection with the large joints and in the heart. This view of the case lays the foundation for him to name two forms of rheumatism, which he denominates locomotor and vasculo-motor; and each of these may be acute, sub-acute, or chronic.

Let us epitomize Dr. Maclagan's idea of the *modus operandi* of an attack of acute rheumatism. The germ is received into the system and enters the circulation—he supposes it to be about the one fifteenth of the size of a red-blood corpuscle, and consequently may go every where with the blood—and travels until it finds its nidus, we will suppose in the white fibrous tissue



about the knee-joint, and then stops and at once begins to multiply very rapidly, and in so doing causes such tissue-change as to establish pain, heat, swelling, and an excess of lactic acid. This constitutes an inflammation of a peculiar character, which quickly extends to the synovial membrane, inducing the most exquisite suffering and symptomatic fever of high grade. But the pabulum for the germ in this locality is soon exhausted, the germs cease to multiply, and the pathological activity comes to a halt at this joint; but the germ has already found a fresh nidus at another joint, which is now in a state of pathological activity identical with that of the first, and progresses and ends as it did; and thus the germ will roam, locate, multiply, and exhaust its pabulum until it has invaded every joint in the body that offers it domicile and support; and by the time it has once played vagrant over the entire territory the knee that it first found richest in pabulum, and which it consumed, has again established a magazine of fresh food for the germ, but perhaps smaller than the original, and the germ here begins another round of the system similar to the first; and this is repeated over and over until the ability of the nidus to manufacture pabulum ceases, and then the rheumatism ends for the time, the germs starve to death, and are eliminated from the system as other effete matter is.

This would be the terminus of the series of events constituting an attack of rheumatism if the pathological activity inspired by the germs was not of a character to create adventitious tissue that does not disappear with the pathological stimulant. Such sequels are not uncommon in and about joints, and, sadly enough, are quite frequent in the heart when the attacks of rheumatism are long continued or often repeated.

In 1874 Dr. Maclagan began the administration of salicin for the relief of rheumatism, led thereto by a course of observation and reasoning that brought him to a conviction that in rheumatism as in intermittent fever there should be found a remedy the product of the region most prolific of the disease. The premise seems a little fanciful, though it may be a lack of knowledge that makes one so regard it; for it is quite possible that intermit-

tent fever more abounds in the habitats of the cinchona than it does in the Pontine marshes or the Wabash flats, where not a cinchona tree exists. Be this as it may, our author was carried by this alleged analogy to expect good results from salicin, an alkaloid of the willow, the willow being a pretty constant production in the territory where rheumatism finds its greatest profusion of subjects, and the result was a success surprising to himself. In 1876 he published in the London Lancet his recommendation of salicin as a remedy for rheumatism, and the profession immediately gave it an extensive trial. At first the inadequate dose forbade the best results, and to this was soon added an imperfect and adulterated drug. The large consumption having exhausted the supply and enormously enhanced the price, unscrupulous dealers resorted to dishonest means to supply the demand, and accordingly when a doctor prescribed salicin his patient got something else with the consequent of a failure to obtain the effects of salicin.

There are more than thirty salicyl compounds, and many of them have been tried in the therapeutics of rheumatism, but only three—namely, salicin, salicylic acid, and salicylate of soda—have met with favor and maintained a reputation in this connection, and for three or four years the medical journals have teemed with articles favoring one or another of these compounds in the treatment of rheumatism, some asserting the superiority of one of them and some of another. Dr. Maclagan claims to have tried each of them fairly, and certainly presents apparently sound and substantial reasons for advocating the equal sufficiency of salicin as an anti-rheumatic, and its superior safety over salicylic acid and the salicylate of soda, and satisfactorily exhibits the error of those who have asserted that salicin becomes salicylic acid in the system before it exercises the attributes of an antidote to the rheumatic poison.

His conclusion after years of experimental clinical observation is that in rheumatism thirty grains of salicin should be given every hour until pain abates, then every two hours while awake until the graver symptoms disappear, then continue in

smaller quantities until convalescence is fully established; and he insists in positive terms that to give less than enough is to get no permanent good of the remedy, and that enough is nothing less than saturating the system with the germicide and maintaining that condition until the last germ in the system is extinct.

Dr. MacLagan is decidedly emphatic that salicin is a positive and practicable antidote to the rheumatic poison, but plainly declares that it does not relieve the sequels of the disease when the morbid action has continued long enough to produce them. These must be treated on rational principles.

The foregoing is a brief recital of the more eminent points of Dr. MacLagan's book, but it should be mentioned in this connection that he covers the associated ground, pertinent to his main theme, very fully, stating fairly the objections that have been urged to his teachings, and with conspicuous candor discussing all disputed points, claiming a verdict only where he adduces evidence sufficient to convince, and displaying the admirable virtue—far from universal with medical writers—of admitting doubts when his knowledge is not of a quality to dissipate them.

So much concerning rheumatism and its treatment with the salicyl compounds has been promulgated through the medical periodical press by himself and a legion of others since Dr. MacLagan's first announcement of his discovery of the specific virtues of salicin in 1876 that the close and retentive student of such literature will not find much that is absolutely new in this fresh publication; but all common readers, and especially the general practitioner of medicine, will find in this volume a most interesting and instructive discussion of the whole subject of rheumatism, including its scientific consideration and its practical bearings, and also important and valuable facts and theories touching related subjects adduced to illustrate and enforce the author's main point. He may not win every one to his own views, but the orderly arrangement of his book, the easy sequence of related parts, the faculty of selecting appropriate words that present his ideas, and an agreeable style of

composition will not leave an intelligent reader in doubt about his position nor the channels by which he reaches it, nor the reasoning by which it is fortified, nor that he feels conscientiously justified in proclaiming the glad tidings of great joy to patient and physician contained in the sentence which opens this review.

Some cis-Atlantic publisher could do the profession a real service by arranging with the author for an American edition of his work. Who will take the hint?

J. F. H.

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**Anatomical Studies upon the Brains of Criminals: A CONTRIBUTION TO ANTHROPOLOGY, MEDICINE, JURISPRUDENCE, AND PSYCHOLOGY.** By MORITZ BENEDIKT, Professor at Vienna. Translated from the German by E. P. FOWLER, M.D., New York, Department of Translation New York Medico-Chirurgical Society. New York: Wm. Wood & Co., Publishers. 1881. 8vo. Pp. 185.

So much earnest and enlightened labor has been bestowed on the nervous system within the last few years that we may confidently count on having presently even more remarkable results than have yet been attained, wonderful as they are.

Assuming that the brain is the director-general of all mental operations and voluntary physical motions, and that the cortical portion of the cerebrum is the multiple-center of all these manifestations, the author seeks to determine whether there is any thing in the appearance, shape, and arrangement of this cortical substance in the criminal that distinguishes him from the upright man. Pursuantly he figures and describes the normal brain of the moral man, and then figures and describes the brains of twenty-two criminals of various grades, ages, and nativities, deducing the conclusion that the convolutions of the criminal are much less perfectly developed and the sulci more abundant, extensive, and confluent than in the more perfect man.

The work appeared in Vienna three years ago, but has now

been translated by Dr. Fowler that it "may help toward bringing the more lowly-organized mass of the human race up to the higher estate of noble manhood, . . . and, most of all, to fit these unfortunates for the infinite life."

The conclusions of Dr. Benedikt did not pass unchallenged in Europe; in fact, they excited hot controversy and bitter feeling; and it is not probable that they will be accepted without protest by all psychologists in America.

The translator's work lacks smoothness and apparently something of exactness, but the publishers have presented a very neat volume in all its parts.

J. F. H.

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**A New Form of Nervous Disease: TOGETHER WITH AN ESSAY ON ERYTHROXYLON COCA.** By W. S. SEARLE, A.M., M.D., Fellow of the Medico-Chirurgical Society of New York, etc. New York: Ford, Howard & Hulbert. 1881. 12mo. Pp. 138.

This volume is the work of one of our homeopathic physicians ambitious to discover something new in the now popular field of nervous pathology. He is enthusiastic in the pursuit of his purpose, and not having succeeded in impressing leading neurologists in New York that he had observed something new among the neuroses he indirectly obtained a note from Charcot, which he prints both in the original French and in translation in his preface. The author claims an indorsement of his discovery in the brief note of Charcot, but a paraphrase of the great French neurologist's words might be made thus: As I have never seen the disease described by Dr. Searle recorded in any book, nor met with it in practice, it must therefore be new. Finding comfort in such a statement classes Dr. S. as among those who are thankful for small favors.

The chief symptoms in the new disease are a sudden shock, or blow, or explosion in the occipital region of the head, accompanied by intense vertigo. He reports twenty-one cases, and of

these he cured fifteen; two are under treatment; and the result in four is unknown. While the author assumes to be a staunch homeopathist, he is not so hidebound but that when he found his patients not recovering under infinitesimal doses he resorted to rational medicine. But he had the best results from his patients chewing the leaves of the erythroxylon coca; and so impressed is he of the virtues of this plant that the last forty-two pages of his book are devoted to a history of the shrub and its medicinal qualities considered both rationally and homeopathically.

Perhaps the reader will not be largely instructed by the book, but he will be amused.

J. F. H.

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**Lectures on Digestion:** AN INTRODUCTION TO THE CLINICAL STUDY OF DISEASES OF THE DIGESTIVE ORGANS. Twelve Lectures delivered to the Practitioners and Advanced Students of Medicine during the Winter of 1878-9. By Dr. C. A. EWALD, Lecturer in the Royal University of Berlin, formerly Principal Assistant in Prof. Frerich's Clinic at the Charite Hospital, Berlin. Translated by ROBERT SAUNDBY, M.D., Edin., Member of the Royal College of Physicians, Emeritus President of the Royal Medical Society, and Assistant Physician to the General Hospital, Birmingham. New York: William Wood & Co. 1881. 12mo. Pp. 149. Text-words about 40,000.

Much the greater part of this little volume is devoted to the consideration of the products of the glands accessory to the solution of our food in the alimentary canal with true German particularity and, one might almost add, with German tediousness. Still, to the student of intricate digestion in its chemico-vital phases this book will prove a timely helper, as the author draws intelligently on the stores of his own experimental acquirements, as well as quotes aptly from the published knowledge of others, to present a correct chart of what is at this time known of the process of digestion and of the structure and function of the complicated apparatus concerned in the service, and he has

the grace to admit that there is a vast deal that is not known in this behalf.

Notwithstanding the minute detail of the various ferments and the results of their action in digestion and absorption which seems almost like a refined distinction, the book is by no means devoid of practical instructions, and the last lecture is wholly devoted to a detail of the digestibility of various foods and their value as nutritious ingesta.

The translation is well done, and the printing and binding good.

J. F. H.

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**The Prescriber's Memoranda.** New York: William Wood & Co. 1881. 18mo. Pp. 301. Text-words about 40,000.

So far as parentage is concerned, this little volume is a waif, sent out into the busy world from the prolific book-incubating establishment of the Woods to float into popularity on its merits or to sink into neglect for the want of them.

The disorders to be prescribed for are arranged alphabetically, beginning with abortion and ending with wounds. Under each head is given such directions for the management and medication of the ailment as the compiler deemed judicious, and for a peculiar class of practitioners the instructions the book contains will be counted a positive boon. There is no sharp seeking after new methods or new remedies, but a conservative love for old and tried and approved plans of management, and for medicaments that have had the sanction of experimental approbation by men eminent in the profession as therapeutists.

Prescriptions of uncounted number will charm the young man who is not quite sure of the combination he ought to make in the case before him, and be a solace to the old practitioner who is too sleepy to call up his knowledge for immediate use.

J. F. H.



## **Clinic of the Month.**

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### **ABSTRACTS OF PROCEEDINGS OF THE INTERNATIONAL MEDICAL CONGRESS.**

THE CAUSES OF FAILURE IN OBTAINING PRIMARY UNION IN OPERATION-WOUNDS—Prof. G. M. Humphry, M.D., F.R.S., Cambridge.

1. The delicacy and sensitiveness of the tissues in infantile and early life, which renders them liable to inflammation and ulceration upon slight irritation.

2. The deficiency of the nutritive energy requisite for the healing processes in the atonic and aged, evinced most especially in the lower limbs, when there is disease of the arteries.

3. The presence of foreign substances in the wound, especially blood or bloody fluid, which separates the surfaces, and has further a tendency to decomposition.

Cut surfaces placed in apposition, and kept so, unite, unless there is some cause preventing union. Witness wounds of the face and other parts in which there is little opportunity for the accumulation of fluid between the surfaces, and in which primary union usually takes place.

The methods most calculated to secure primary union are therefore those which maintain the apposition of the cut surfaces most effectually and with least irritation, and which provide against the presence of blood or bloody fluid in the wound—sutures of such material and applied in such manner as is least likely to cause irritation; quietude of the part; gentle, uniform pressure, and fixing on a splint where that can be done.

The effusion of blood into the wound after it has been stitched up is best prevented by carefully securing the vessels with ligature, or by torsion. Ligatures are easily applied, are almost unfailing, and are attended with little or no ill effect. The material of which they are made, together with the tissue included in them, undergoes absorption; so that it is immaterial how many are applied. The actual cautery may be used freely as an adjunct. The sponging of the wound will promote oozing at the time, and tends to lessen the risk of it afterward. Insert drainage-tube and express the blood from the wound as

long as it continues to flow through the tube after the wound has been stitched up.

Antiseptics an additional precaution, preventing the decomposition of any bloody fluid which in spite of the above-named precautions may be effused into the wound. They are especially valuable when cavities are opened.

Esmarch's band promotes bleeding from cut surfaces soon after its removal, but rather lessens the risk of subsequent effusion.

#### ON EXTIRPATION OF THE KIDNEY—Professor Czerny.

1. Extirpation of one kidney is indicated in cases of wound of the kidney, floating kidney, pyonephrosis, calculous pyelitis, cysts, and hydro-nephrosis, tumors, and fistulae communicating with the ureter, as soon as the life of the individual is endangered and other methods of treatment prove ineffectual, provided that the other kidney is sound.

2. Nephrectomy can be performed by an abdominal section which involves opening the peritoneum, or by means of a lumbar incision which leaves the peritoneum intact. The first method is suitable for cases of movable kidney; the other is indicated when the kidney is quite fixed or nearly so.

3. The lumbar incision is the safer of the two plans, and therefore is worthy of further development.

4. The best method of dealing with the pedicle is to carefully ligature it and cut it short, adopting antiseptic precautions.

5. Incision of cyst and stitching its margin to the skin is the best plan of treatment in cases of fixed hydro-nephroses, empyema of the pelvis of the kidney, and echinococcus of the kidney.

6. The plan of catheterizing the ureters of women and constricting the ureters of men, in order to confirm the diagnosis of disease affecting one kidney only, has not been sufficiently practiced, and deserves a wider employment, aided perhaps by the use of the endoscope at the same time.

#### ON THE RESULTS OF THE TREATMENT IN CHRONIC DISEASE OF THE KNEE-JOINT, INCLUDING AN ACCOUNT OF FIFTY RESECTIONS OF THE JOINT—Professor Kocher, Berne.

1. Amputation of the thigh is indicated in cases where white swelling occurs in patients suffering from tuberculosis of the internal organs, or those whom the disease has rendered very anemic, or who present a constant high temperature, or are reduced by prolonged suppuration.

2. Resection is the best treatment in all other cases, if contraction of the joint or considerable functional disturbance has occurred.
3. Under these circumstances resection gives in every way better results than are obtained from conservative treatment.
4. Resection should be only resorted to in exceptional cases in childhood or advanced age. The results are as good or better as regards union of the ends of the bones in adult life than in childhood.
5. The mortality since the author commenced the practice of resection has only been twelve per cent; and now—thanks to the recent improvements and the introduction of antiseptics—the operation has become free from danger.
6. His present endeavor is so to improve the method that movable and at the same time firm joints may be secured.

ON THE RELATIONS BETWEEN ADENOMA SARCOMA AND CARCINOMA OF THE MAMMARY GLAND IN THE FEMALE; THEIR DIAGNOSIS IN THE EARLIER STAGES OF DISEASE, AND THE RESULTS OF THEIR TREATMENT BY OPERATIONS—Samuel Gross.

1. That from a genetic standpoint there is a distant connection between adenoma and carcinoma, since they both originate from the glandular constituents of the mamma. In the former neoplasm, however, there is a numerical increase of the lacteal glands; in the latter there is merely a multiplication of the epithelial cells, the descendants of which extend into the lymphatic vessels and the perivascular sheaths of the blood-vessels. From a clinical standpoint adenoma is a benign tumor and carcinoma is a malignant growth.
2. That sarcoma has neither a genetic nor a structural affinity with adenoma or carcinoma, but that it resembles the latter in its malignant attributes.
3. That in view of the recurring tendency of adenoma after simple enucleation the entire breast should be extirpated with it.
4. That surgical intervention in sarcoma and carcinoma not only retards the progress of the disease by preventing local dissemination and the development of visceral tumors, but it also not infrequently results in permanent recovery.
5. That local reproductions in sarcoma and carcinoma do not militate against a final cure, provided they are freely excised as soon as they appear.
6. That lymphatic involvement does not forbid operations in carcinoma, since infected glands were removed in nearly one third of the examples of permanent cure.

7. That the subjects of sarcoma and carcinoma are almost without exception safe from local and general reproduction if three years have elapsed since the last operation.

8. That all sarcomata and carcinomata of the mammary gland, if there are no evidences of metastatic tumors, and if thorough removal is practicable, should be dealt with as early as possible by amputating the entire breast and its integuments and dissecting off the subjacent fascia. In carcinoma, moreover, the axilla should be opened with a view to its exploration and the removal of any glands which were not palpable prior to interference.

ON PARTIAL EXCISION OF THE BLADDER—Dr. Adolf Fischer, Surgeon, Buda-Pesth.

The ancient surgeons believed that a surgical wound of the bladder would terminate fatally.

In more recent times, however, comparatively large portions of the bladder have been removed on account of prolapsus without a fatal result.

In order to answer, on the ground of practical experience, the following questions, I have excised larger or smaller portions from the bladders of seven dogs.

1. Is it necessary, in operating on dogs, to take strict antiseptic precautions?

2. Is the operation attended by great dangers, and has the wound of the bladder, if properly stitched, a tendency to heal?

3. Which material and which kind of suture is the most suitable?

Four of the seven dogs recovered.

The first two were operated upon antiseptically; one died. Post-mortem—Sutures not accurate; peritonitis.

The second two not strictly antiseptically; one died on the third day with a high temperature. Post-mortem—Hemorrhage into the peritoneal cavity.

Three dogs operated upon not antiseptically at all; one died. In the fatal case I had excised a considerable part from the trigonum vesicæ. Post-mortem—Gangrene of the bladder.

The material for sutures was Lister's antiseptic silk, silk boiled in five-per-cent carbolic lotion, and catgut. Each of these materials answered well. I used the interrupted and the combined suture, and a modification of my own—the combined interrupted suture.

From these experiments the following deductions may be drawn:

1. In operating on dogs antiseptic precautions are not absolutely necessary.

2. Wounds in the bladder which are afterward carefully united by sutures are not particularly dangerous.

3. Good results are principally dependent upon the accuracy of the suture.

There can be no doubt that this operation is more likely to be successful on the human subject, because it can be done antiseptically. The bladder can be subjected to a mechanical treatment (irrigation with antiseptic fluids), a catheter can be kept in the bladder, and absolute rest can be secured.

The indications for partial excision of the human bladder may be brought at present under the following heads:

1. Traumatic injuries to the bladder, with contused edges.
2. Diverticula of the bladder, containing encysted calculi.
3. General dilatation of the bladder, when the cause of the disease has either been removed or is removable.
4. Benign and malignant tumors involving the wall of the bladder.
5. Vesico-abdominal, vesico-vaginal, and recto-vesical fistula.
6. Destructive ulcerations threatening rupture, and withstanding other methods of treatment.

REMOVAL OF THE ENTIRE TONGUE WITH SCISSORS THROUGH THE MOUTH—Walter Whitehead, F.R.C.S.E., F.R.S., Edin., Surgeon Manchester Royal Infirmary.

On November 3, 1877, I removed the whole of the tongue through the mouth with scissors. *Vide* British Medical Journal, 1877, Dec. 8, p. 393.

This case, to the best of my knowledge, was the first instance of the entire tongue having been removed for disease through the mouth by simple excision. More than thirty tongues have since been removed by the same plan.

The operation is conducted in six stages after the following simple manner:

1. The mouth is opened to the full extent with a suitable gag, and the duty of attending to this is intrusted to one of the two assistants required.
2. The tongue is drawn out of the mouth by a double ligature passed through its substance an inch from the tip.
3. The operator commences by dividing all the attachments of the tongue to the jaw and to the pillars of the fauces.
4. The muscles attached to the base of the tongue are then cut across by a series of successive short snips of the scissors until the

entire tongue is separated on the plane of the inferior border of the lower jaw, and as far back as the safety of the epiglottis will permit.

5. The lingual or any other arteries requiring torsion are twisted as divided.

6. A single loop of silk is passed by a long needle through the remains of the glosso-epiglottidean fold of mucous membrane, as a means of drawing forward the floor of the mouth should secondary hemorrhage take place.

The patient is fed for the first three days by nutritive enemata, satisfying thirst by occasionally washing out the mouth with a weak iced solution of permanganate of potash.

The difficulties and dangers of the operation are few. Hemorrhage is easily controllable. I have twice removed the entire tongue without having to secure a single vessel, and more than once have only had to twist one lingual artery.

A table of twenty-eight cases, with one death the immediate result of the operation (an old man aged sixty-nine), accompanies the paper. Two other deaths occurred in consequence of the operation, but from remote causes.

Taking the most unfavorable estimate, the deaths in the twenty-eight cases do not amount to eleven per cent, and when contrasted with the thirty to sixty per cent of deaths resulting from removal of the tongue by any other operation I venture to affirm that substantial evidence has been submitted in favor of removal of the tongue with scissors.

#### THE TREATMENT OF FRACTURED FEMUR—Rushton Parker, Professor of Surgery in Liverpool.

The objects in view are—

1. Union without deformity or lameness.
2. By means artistic, effectual, or labor-saving.
3. While increasing the patient's liberty.

For all fractures below the trochanter the knee-splint of Hugh Owen Thomas is advised, and for all fractures of the neck the hip-splint of the same surgeon.

In selecting the "knee-splint" for fractures of the shaft, either the "walking-splint" (made right and left) is used, or preferably the "bed-splint," which suits either side. Side-straps are attached to the patient's leg and tied to the lower end of the splint, counter-pressure being furnished by the oval-padded ring against the perineum and encircling the thigh.

Thus the full length of the limb is secured either at the first setting

or within the first few days, as in the use of the long splint and perineal band of Liston. The leg lies slung, evenly supported between the bars of the splint, on a towel or other piece of cloth pinned over them, and secured by a bandage. The thigh is encircled by short hollow splints tied tightly round the limb by strips of bandage, and also slung between the bars.

In cases of re-fracture, in which there may have been previous shortening, the reunion may by this method be secured without shortening more easily than by any other known procedure.

The treatment of fractured condyles is the same as that of inflammation of the knee-joint in the same splint. The limb is slung on the towel or cloth between the bars, having extension straps on the leg to keep the upper end of the splint in contact with the perineum, with a broad bandage round the leg and another round the thigh. The joint is left exposed, and let alone until union is complete and the suppleness of the capsule has returned, passive movement being utterly repudiated.

Fractures of the neck are all best treated in Thomas's "hip-splint," applied as in hip-joint disease. In fracture without impaction or shortening, when the splint is applied the limb is maintained so perfectly in a straight and steady posture that shortening will most probably not occur.

In the event of shortening, extension will lessen or remove it. In fracture near the head non-union is likely to be prevented, while in impacted fracture of the neck the maximum of comfort to the patient is secured, though the shortening be inevitable. In every case the liberty of the patient in bed is the greatest possible, allowing easy changes of position (in the knee-splint even the sitting posture) and the unassisted use of the bed-pan, while maintaining the efficiency of treatment. When locomotion is resumed on the occurrence of union and the cessation of all tenderness, with the aid of crutches and a high boot or patten under the other foot the injured limb is in either splint kept off the ground and swung straight until the union be hard.

In the unavoidable event of non-union of the neck the permanent use of the knee-splint will permit of progression without the necessity of crutches or help from the arms.

In compound fracture the Listerian or any other form of dressing can be adapted to each variety of injury with the same splints.

It is thus claimed that the objects mentioned at the beginning are attainable results in most cases, being habitually realized by the means described in the surgical wards of the Liverpool Royal Infirmary and in the practice of their originator.



## ON FRACTURES OF THE LOWER JAW—Thos. Brian Gunning, M.D.

1. In opposition to the ordinarily-received teaching that a radical point in the treatment of a fractured human bone is to keep the fragments in place until reunited, it will be shown that the lower jaw will reunite without holding the fragments together, and even when a portion of its body so large as to have contained one bicuspid and two molar teeth is lost through necrosis.

2. The four-tailed bandage for the treatment of fractures of the lower jaw is superior to any other, the sling bandages introduced within the last twenty-five years being unfit to use in most cases.

3. It will be shown that in fractures through the neck of the lower jaw a misplaced condyle can only be set with the jaw closed, and the way to set it will be explained.

4. It will be shown that in the treatment of fractures of the ramus, or of the coronoid process, or the neck of the condyle, interdental splints are in most cases indispensable, and that hard rubber splints are superior to all other appliances for fractures of the jaws.

## ANTISEPSIS IN MIDWIFERY—Professor Spiegelberg, Breslau.

The great reform in surgery brought about by the antiseptic treatment could not fail to have a deep influence upon the treatment of the complications in childbed, as it was well known long ago that the latter are the same which arise from wounds. If, however, scrupulous cleanliness, which had been advocated long ago, favored a normal course of the puerperium, the practical gain was not very great.

The idea that the puerperal wounds are infected and the inflammation of the genital organs are initiated by germs coming from outside became more in vogue, and the idea that phlogogenous matter might be produced spontaneously within the genital tract was almost abandoned. The consequence of this idea was recommending the most scrupulous cleanliness of hands and instruments, forbidding practitioners engaged in midwifery to attend other patients, forbidding students engaged in dissecting to attend midwifery cases, forbidding nurses attending cases of puerperal fever to attend normal cases at the same time.

The experience that all these measures reduced the number of bad cases only little originated the idea of secondary antiseptics. Intra-uterine irrigations and drainage came in use, but without much avail. The opinion took root that there was no identity between wound and childbed complications; that there existed an essential puerperal process.

These failures can be made comprehensible by laying clearly open the development of infection; and here too is it necessary to refer to the history of the antiseptic surgery.

The theory and practice of Lister's system is founded upon the view, now sufficiently justified by experience, that infection is brought about by the action of germs which float about in the surroundings of the patient and which fall on the recently-made wound. It is therefore absolutely necessary to clean the surroundings from the germs; if that is not practicable, to destroy the efficiency of these germs while the wound is open, and by keeping subsequently the wound closed. The application of these rules upon the puerperium means: The strictest cleanliness and antiseptics during the time in which the puerperal wound arises—that is, during birth—as well from the part of the persons attending the mother as from the mother herself. Prevention of air entering the genital tract; and as that is not wholly unavoidable, disinfection by frequent irrigation with antiseptics during birth. After birth care must be taken to secure perfect rest for the genital tract to encourage involution, avoiding every intra-vaginal or intra-uterine manipulation which is not absolutely necessary. If so, it must be done under strictly antiseptic precautions.

Secondary antiseptics—that is, antiseptics after the infection has taken place—is of not much avail. It is only directly useful in processes of decomposition, so long as they have not passed the surfaces of the tract and not yet attacked the parenchyma of the organs. But if that is not the case antiseptics is only a palliativum, but no trustworthy remedy, since drainage and irrigation do not hit the deep seats of the disease and do not remove or destroy the entered germs, not to speak of the inconveniences of the practical application of the secondary antiseptics.

ON THE SURGICAL TREATMENT OF PROLAPSE OF THE UTERUS—Dr. G. Eustache, Lille.

1. The only surgical operation capable of curing complete prolapse of the uterus is the partitioning of the vagina by the method of Professor Le Fort, of Paris.

2. In order that this operation may prove successful it should be modified as follows: In place of a linear denudation one centimeter in width, a denudation at least four centimeters wide should be made on each wall from the insertion of the vagina on the neck of the uterus to the vulva; that is, for a length of six centimeters. Instead of bringing the two walls together by metallic wire, the catgut suture

should be used, which neither irritates nor ulcerates the parts, and which does not require removal, as the catgut is absorbed.

History of four cases treated in this way and cured.

**OÖPHORECTOMY**—Dr. Thomas Savage, Birmingham.

A record read of thirty consecutive successful operations performed during the last two years for various conditions, which are detailed—ten being for long-standing and painful prolapse of the ovary, and four for myoma. The author's experience up to the present time leads him to consider that for the two above-named conditions there is a large field of successful and beneficial practice open to oöphorectomy in properly-selected cases, but that in the cases of so-called ovarian dysmenorrhea there is considerable difficulty in coming to a conclusion as to the cases where it will be likely to be suitable, for it seems necessary that a considerable period must elapse after the operation in these cases before the benefits hoped for are apparent. The author thinks the enlargement of the prolapsed ovary is often due to an inversion of the organ into Douglas's space, giving rise in the first instance to edema and subsequently to areolar hyperplasia or a cystic condition. With the one exception—the inability to conceive—patients after oöphorectomy possess every attribute of womanhood. The facility and safety of the operation being now fully established, it becomes our next duty to define as far as possible the conditions for which it was applicable, also those for which it is inapplicable, so that it may not be abused.

**THE EXCITING CAUSE OF ATTACKS OF HYSTERIA AND HYSTERO-EPILEPSY**—Graily Hewitt, M.D., F.R.C.P.

The object of the paper is to demonstrate by the results of clinical observation that in cases of hysteria and so-called hystero-epilepsy the exciting cause of the attacks is distortion of the uterus produced by flexion of the uterus upon itself, either forward or backward.

The attacks are the result of reflex irritation, the irritation consisting in the physical compression and tension of the tissues of the uterus consequent on the forcible bending of the body of the uterus on the cervix. This bending has the effect of producing compression of the uterine tissues at and near the angle of flexion, and by its interference with the circulation in the uterine tissues it has the further effect of producing a continuous congestion of the body of the uterus.

The evidence offered by the author in support of the above explanation is the recital of eighteen cases observed by him during a period

of ten years. In these cases, some of which were cases of severe attacks of hysteria, others identical with those described as cases of hysterio-epilepsy, and a few in which the symptoms were of a less severe character, the condition of the uterus was carefully investigated.

Marked distortion of the uterus was present in all the cases, the most severe cases being those in which the uterine distortion was greatest.

Complete relief from the attacks and hysterical symptoms was obtained in these cases by a treatment directed to the removal of the uterine distortion. Out of eighteen cases perfect relief is known to have been obtained in seventeen. The subsequent history is not fully known in one case.

Of the eighteen cases related twelve were cases of ante flexion of the uterus and six were cases of retroflexion.

The complete cessation of the hysterical symptoms in the cases related and the uniform success of treatment directed to the rectification of the shape and position of the uterus conclusively show, in the author's opinion, that the exciting cause of the attacks was the flexed condition of the uterus.

#### ON THE LOCAL TREATMENT OF CHRONIC METRITIS—Prof. Amann, Munich.

Most cases of chronic metritis require local treatment for their cure. If the disease be limited to the mucous membrane of the cervical canal the treatment is comparatively simple, and cure can be effected by various harmless means. Greater difficulty is met with when chronic inflammation of the body or of the body and neck of the uterus calls for local treatment. For many years I have carefully tested the various means recommended during the last twenty years in the treatment of the affection in question in hospital and private practice in more than three thousand cases, and have come to the conviction that only one method acts with certainty without being troublesome and *dangerous*. This is new only in the manner of its execution, and consists in the systematic cauterization of the cavity of the body, and eventually of the cervix of the uterus, by means of an instrument like a sound, into a hollow in the upper end of which is fused lapis mitigatus. This can be employed, as is self-evident, according to the behavior of the endometrium and the resisting power of the uterus in individual cases, at one time more frequently and thoroughly, at another more rarely and cautiously, and will have, according to the

peculiarities of the special case, by itself alone or in conjunction with other means (topical blood-letting, scraping off of growths of the endometrium), almost sure results. Only in a few cases of large tumors or severe bleeding-granulations of the endometrium is the employment of the galvano-cautery or thermo-cautery necessary. The intra-uterine application of *lapis mitigatus* is, with the necessary caution, absolutely free from danger, and in a small number of cases only does it cause pain, which, however, is usually of short duration. Sometimes also it gives rise to considerable but transient bleeding. Once only have I noticed, after a severe cauterization of the whole of the uterine cavity, dangerous metritis or peri-metritis, which, however, ended in a few weeks in complete recovery. Even slighter degrees of acute endometritis and acute metritis occur, according to my experience, in barely two per cent of all the cases.

One of the chief advantages of the proceeding in question is that it can be carried out without assistance in at least ninety-five per cent of cases, and usually in five, exceptionally in ten minutes. Within this time, moreover, the cleansing of the uterine canal from mucus, a necessary preparation for cauterization, as well as the dilatation of the narrow canal by means of metallic dilators, can be accomplished. Further, this procedure is applicable when the condition is complicated by severe flexions and versions, either after straightening the organ immediately before cauterization, or, if the canal be of normal width, by cauterizing with the sound-like instrument forthwith. This is done without a speculum just as the sound is introduced. By reason of the rapidity of the cauterization, which is finished in three to five seconds, and because, by the revolving of the caustic holder, contact of the caustic with the individual parts of the endometrium is extraordinarily short, coating of the caustic with coagulated albumen is prevented. Immediately after cauterizing a large tampon of wadding soaked in a solution of tannin should be introduced into the vagina, in order to prevent the caustic dissolved in the uterine cavity from escaping into and through the vagina.

THE CURABILITY OF UTERINE DISPLACEMENTS—Paul F. Mundé, M.D., New York.

Finding that the text-books either entirely omit all mention of the possibility of permanently curing displacements of the uterus by any of the methods in use, or give but vague statements on the subject, and impressed with the importance of having some positive conclusions on this matter, both for the sake of the patient and the satisfac-

tion of the physician, the author has analyzed the numerous cases of displacements which have come under his care (eight hundred and ninety-five), and arrives at the following conclusions:

1. Displacements of the uterus are permanently curable in the large majority of cases only when recent, or when a complete tissue metamorphosis, as occurs during pregnancy and after parturition, takes place.

2. Chronic cases (of more than a year's standing) are but rarely curable permanently, except occasionally under the last-named circumstances. Apparent cures reported by some authors and witnessed by many physicians soon show themselves to have been but temporary.

3. Pessaries form unquestionably the most practical, rational, and (temporarily) the most efficient means of treating uterine displacements. Cures are but rarely accomplished by them.

4. Medicated, chiefly astringent tampons, intelligently applied every day by the physician, give the best chances for permanent cure. This is particularly true of prolapsus, but holds good for all forms.

5. Electricity locally applied deserves more extended application.

6. All methods should be persevered in for months and years before success is to be expected.

#### AMPUTATION OF THE NECK OF THE UTERUS FOR CHRONIC METRITIS—Dr. A. Le Bond.

1. Amputation of the neck of the uterus may be practiced for chronic metritis when the disease has resisted other methods of treatment.

2. The operation being undertaken for the cure of a disease which never proves fatal, should be performed after the least dangerous method.

3. The neck should be amputated at the fundus of the vagina by means of the galvano-cautery.

## Notes and Queries.

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THE CASE OF PRESIDENT GARFIELD.—The clearest and most succinct statement of the case of the late President, as well as the most scientific, legitimate, and impartial criticism of its surgical management has in our opinion been made in the November number of the *Annals of Anatomy and Surgery*, by Dr. Lewis Pilcher, of Brooklyn, N. Y. We make room for the concluding portion of the article.

There are questions which will continue to be asked, and upon the answers to which procedures in cases of similar character hereafter must be based. It is apparent from an inspection of the temperature and pulse charts that from the fourth day there entered into the case an influence which persisted to its close. These regular and persistent fluctuations over a slight range, coupled with progressive emaciation and slow ebbing of muscular strength, notwithstanding the patience and hopefulness of the patient gave rise to delusive impressions of improvement, show septic infection as early and continuously present. While the more evident conditions of suppurating thrombi, of embolic infarctions, and metastatic abscesses which make up an *ensemble* of pyemia are absent, the conditions which mark chronic septicemia are unmistakable. The gastric irritability, the parotid inflammation, the suppurating acne, and the carbuncle on the back are all expressions of this septic condition. Though the record of the case shows that these symptoms were all combated with consummate skill, yet their cause was left untouched. That the injury to the splenic artery should have become, after eleven weeks, the source of a fatal hemorrhage, can be explained only by a failure of repair and a condition of degeneration due to the general depraved blood state. No one will be so absurd as to claim that the rent in the splenic artery, four tenths of an inch long, was made by the ball at the time of its entrance into the body. No slowly-dissecting aneurism would have resulted from such an injury to a large artery so near the heart, but an overwhelming and speedily-fatal hemorrhage. The erosion of the arterial coats must have been due to their involvement in the ulcerative processes going on in the track of the ball—tissue-death instead of tissue-building—the culmination of the weeks of general blood-



contamination. The occasion of this septic infection is manifestly to be found in the retention or incomplete escape of the *débris* and discharges from that portion of the wound beyond the fractured eleventh rib. In raising the question whether in this case the resources of surgery were exhausted while this condition was unrelieved, not the slightest idea of unfriendly criticism of the eminent gentlemen having charge of the case can be entertained. Their judgment was, after taking all the circumstances of the case into account, that all that was prudent to do had been done. Great responsibility was upon them, and at such times all men become cautious. Critical examination, however, of the case may afford some lesson of value for the future. The wisdom of deferring further exploration on the 4th of July, when, though every thing pointed to a perforating wound of the abdomen, the apparent progress of the patient was most favorable, none can gainsay. When, however, did it become manifest that this favorable progress had ceased? To us, now, as we study the chart of the first three weeks, the indications of unfavorable progress after July 6th are unmistakable, and the explosion of July 23d means much more than a superficial pus sac. We can not but regret that the occasion of the removal of the splinter of the rib on July 26th was not improved for the thorough exploration of whatever conditions lay beyond it. Had the sinus leading to the splintered vertebra then been detected and freely opened up, it might have been that the nation would not have been in mourning today; for certainly there was nothing necessarily fatal in the condition of the bone itself.

In extenuation of the failure to trace the course of the ball any further than the eleventh rib, stress has been laid upon the supposed considerable deflection of the ball at that point so as to make a track so sinuous as to make satisfactory exploration impossible. It is to be regretted that the anatomical relations of the parts injured, as exposed *post mortem*, negative the existence of any such deflection. At the post-mortem examination the track from the skin to the rib was healed and a depressed cicatrix alone marked its place. Four points in the track of the ball were, however, positively fixed, viz. the points of impingement on the two ribs and on the vertebra, and its final resting-place behind the pancreas. A straight line will connect them all. To study the anatomical relations of this bullet-track, Plate 15 of Braune's Atlas of Topographical Anatomy will be found invaluable. It represents a transverse section of a body through the middle of the first lumbar vertebra, and, far better than any of the imaginary diagrams which have been published, exhibits the manner in which a bullet with unswerving course might successively penetrate eleventh rib, twelfth

rib, and body of lumbar vertebra to reach the posterior surface of the pancreas. All the established facts indicate that the track in the tissues between the eleventh rib and the skin was likewise in this line; the great apparent distance along the wound from the skin to the rib—so great that the little finger thrust in to its full extent barely reached the inner side of the injured rib—demonstrates that this channel was an oblique one; while the known behavior of conical balls, especially at short range, continuing a direct course, penetrating all tissues in their way till their power is exhausted, lends its weight in contradiction to the existence of deflection. No description of the appearance of the ball when found has any where been given. If it had been flattened or greatly distorted by glancing from a bone, the fact would certainly have been noted. The only conclusion which can be drawn from all these facts is that the ball from the moment of its entering into the body till it finally rested behind the pancreas pursued a straight undeviating course.

There is one lesson which this case teaches which is especially illustrated in the report made by the principal attending surgeon; namely, the danger of making a diagnosis. It is evident that having made a diagnosis of a lesion of minor importance, all its mutations were by him interpreted in the light of that diagnosis, and the significance of the profound symptoms which the case presented failed to be appreciated by him. A candid confession that the data were insufficient, and the retaining of the mind in a judicial state throughout, would have saved medical science from the opprobrium which has been cast upon it by the revelations of the autopsy in this case. The possibility of a preconceived opinion—yclept diagnosis—to warp the judgment explains how it was possible for bulletins announcing uninterrupted progress toward recovery to be issued when the condition was really one of uninterrupted emaciation and septic infection; for the physicians to announce that the symptoms showed improvement, while the secretary of state telegraphs that the symptoms are of the gravest character and the strength failing; and for declarations that the patient is convalescent, when he is at the point of death from intense septicemia.

THE STATE BOARD OF HEALTH OF INDIANA.—The following physicians were appointed on this Board: Dr. J. W. Compton, Evansville, President; Dr. Wm. Lomax, Marion; Dr. W. W. Vinnedge, Lafayette; Dr. J. M. Patridge, South Bend, Tippecanoe County; Dr. Thad. M. Stevens, Indianapolis, Secretary of the Board and State Health Officer.

DR. T. GAILLARD THOMAS has resigned the chair of obstetrics and gynecology in the College of Physicians and Surgeons, New York. Dr. James W. McLane was appointed to the vacated chair, and Dr. Paul F. Mundé was appointed clinical lecturer on the diseases of women.

DR. RICHARD GUNDRY, formerly Superintendent of Asylums for the Insane in Ohio, has been made Professor of Materia Medica and Diseases of the Nervous System in the College of Physicians and Surgeons at Baltimore.

THE first medical library established in the United States was that of the Pennsylvania Hospital, established in 1762. The first State medical society was that of New Jersey. The first original medical work was published in New Haven in 1788. It was entitled "Cases and Observations by the Medical Society of New Haven County."

HUXLEY predicts that in the progress of medicine it will become possible to introduce into the economy a molecular mechanism which, like a very cunningly-contrived torpedo, shall find its way to some particular group of living elements, and cause an explosion among them, leaving the rest untouched.

DOCTORS were humorously compared by Addison to the army of ancient Britons, described by Julius Cæsar: "Some slay on foot and some in chariots, but those in the chariots do the most execution."

PRIZE OFFERED BY KENTUCKY STATE MEDICAL SOCIETY.—The Committee on Prize Essays for the Kentucky State Medical Society has decided to offer fifty dollars (\$50) for the best essay embodying the results of original experimental research, or original clinical observation on the nature, mode of propagation, pathology, and treatment of scarlatina.

1. Competing essays must be the composition of and in the handwriting of the authors, who must be members of the Kentucky State Medical Society.

2. They must be marked by a motto or character, accompanied by a sealed envelope, bearing the same motto or character, inclosing the author's name.

3. They must be sent to the chairman of the committee before the 15th day of March, 1882.

The committee may reject any or all essays presented. In case of award, the successful essay shall be read to the Society on the morning of the second day of the annual meeting, after which the chairman of the committee shall open the sealed envelope, make known the name of the author, and publicly award the prize.

DUDLEY S. REYNOLDS, M.D., *Chm.*

HENRY M. SKILLMAN, M.D.

A. R. MCKEE, M.D.

DAVID W. YANDELL, M.D.

CHARLES H. TODD, M.D.

DR. BEN. J. BALDWIN, of this city, has been appointed House Surgeon to the Manhattan Eye and Ear Hospital in New York. The governors of this charity could not have made a better selection.

WALSH'S PHYSICIAN'S HANDY LEDGER, 1882. WALSH'S PHYSICIAN'S COMBINED CALL-BOOK AND TABLET, 1882. Sixth edition. RALPH WALSH, M.D., 332 C Street, Washington, D. C.—Dr. Walsh has conferred a real benefit on the physician by preparing these two publications. The first greatly simplifies book-keeping, making the matter of accounts accurate and easy. The call-book is convenient and well arranged, and besides affording ample space for entering visits and memoranda, contains in small compass a posological table, many valuable formulæ, apothecaries' weights and measures rendered into metric measures, etc., etc.

THE PHYSICIAN'S VISITING LIST FOR 1882. Philadelphia. Lindsay & Blakiston.—For thirty years now this the greatest of time-savers, in its way, has been our daily companion, and in all that period has been a convenience which it would be difficult to express in words.

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COUNTY MEDICAL LIBRARY.